KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

pagepro 5650EN/4650EN

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KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

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SAFETY AND IMPORTANT WARNING ITEMS

Read carefully the safety and important warning Items described below to understand them before doing service work.

IMPORTANT NOTICE

Because of possible hazards to an inexperienced person servicing this product as well as the risk of damage to the product, KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. (hereafter called the KMBT) strongly recommends that all servicing be performed only by KMBT-trained service technicians.
Changes may have been made to this product to improve its performance after this Service Manual was printed. Accordingly, KMBT does not warrant, either explicitly or implicitly, that the information contained in this service manual is complete and accurate.
The user of this service manual must assume all risks of personal injury and/or damage to the product while servicing the product for which this service manual is intended.
Therefore, this service manual must be carefully read before doing service work both in the course of technical training and even after that, for performing maintenance and control of the product properly.
Keep this service manual also for future service.

DESCRIPTION ITEMS FOR DANGER, WARNING AND CAUTION

In this service manual, each of three expressions "⚠ DANGER", "⚠ WARNING", and "⚠ CAUTION" is defined as follows together with a symbol mark to be used in a limited meaning.
When servicing the product, the relevant works (disassembling, reassembling, adjustment, repair, maintenance, etc.) need to be conducted with utmost care.

⚠ **DANGER: Action having a high possibility of suffering death or serious injury**

⚠ **WARNING: Action having a possibility of suffering death or serious injury**

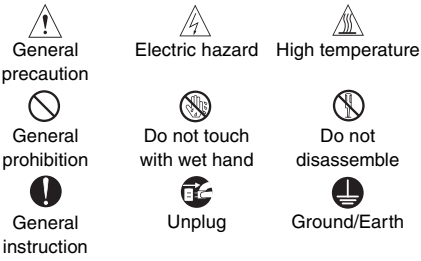
⚠ **CAUTION: Action having a possibility of suffering a slight wound, medium trouble, and property damage**

Symbols used for safety and important warning items are defined as follows:

△ :Precaution when servicing the product.

⃠ :Prohibition when servicing the product.

● :Direction when servicing the product.



SAFETY WARNINGS

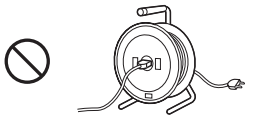
[1] MODIFICATIONS NOT AUTHORIZED BY KONICA MINOLTA BUSINESS TECHNOLOGIES, INC.

KONICA MINOLTA brand products are renowned for their high reliability. This reliability is achieved through high-quality design and a solid service network.
Product design is a highly complicated and delicate process where numerous mechanical, physical, and electrical aspects have to be taken into consideration, with the aim of arriving at proper tolerances and safety factors. For this reason, unauthorized modifications involve a high risk of degradation in performance and safety. Such modifications are therefore strictly prohibited. the points listed below are not exhaustive, but they illustrate the reasoning behind this policy.

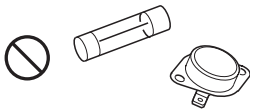
Prohibited Actions

⚠ DANGER

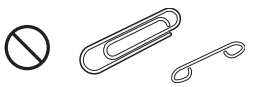
- Using any cables or power cord not specified by KMBT.



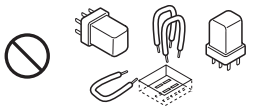
- Using any fuse or thermostat not specified by KMBT. Safety will not be assured, leading to a risk of fire and injury.



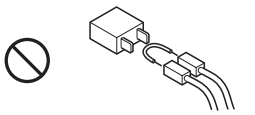
- Disabling fuse functions or bridging fuse terminals with wire, metal clips, solder or similar object.



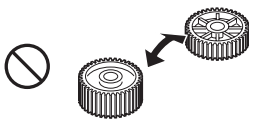
- Disabling relay functions (such as wedging paper between relay contacts)



- Disabling safety functions (interlocks, safety circuits, etc.) Safety will not be assured, leading to a risk of fire and injury.



- Making any modification to the product unless instructed by KMBT
- Using parts not specified by KMBT



[2] POWER PLUG SELECTION

In some countries or areas, the power plug provided with the product may not fit wall outlet used in the area. In that case, it is obligation of customer engineer (hereafter called the CE) to attach appropriate power plug or power cord set in order to connect the product to the supply.

Power Cord Set or Power Plug

⚠ WARNING

- Use power supply cord set which meets the following criteria:
  - provided with a plug having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
  - the plug has pin/terminal(s) for grounding, and
  - provided with three-conductor cable having enough current capacity, and
  - the cord set meets regulatory requirements for the area.

  Use of inadequate cord set leads to fire or electric shock.

- Attach power plug which meets the following criteria:
  - having configuration intended for the connection to wall outlet appropriate for the product's rated voltage and current, and
  - the plug has pin/terminal(s) for grounding, and
  - meets regulatory requirements for the area.

  Use of inadequate cord set leads to the product connecting to inadequate power supply (voltage, current capacity, grounding), and may result in fire or electric shock.

- Conductors in the power cable must be connected to terminals of the plug according to the following order:
  - Black or Brown: L (line)
  - White or Light Blue: N (neutral)
  - Green/Yellow: PE (earth)

  Wrong connection may cancel safeguards within the product, and results in fire or electric shock.

[3] CHECKPOINTS WHEN PERFORMING ON-SITE SERVICE

KONICA MINOLTA brand products are extensively tested before shipping, to ensure that all applicable safety standards are met, in order to protect the customer and customer engineer (hereafter called the CE) from the risk of injury. However, in daily use, any electrical equipment may be subject to parts wear and eventual failure. In order to maintain safety and reliability, the CE must perform regular safety checks.

1. Power Supply

Connection to Power Supply

⚠ WARNING

- Check that mains voltage is as specified.

  Connection to wrong voltage supply may result in fire or electric shock.

- Connect power plug directly into wall outlet having same configuration as the plug.

  Use of an adapter leads to the product connecting to inadequate power supply (voltage, current capacity, grounding), and may result in fire or electric shock.

  If proper wall outlet is not available, advice the customer to contact qualified electrician for the installation.

- Plug the power cord into the dedicated wall outlet with a capacity greater than the maximum power consumption.

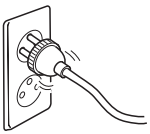
  If excessive current flows in the wall outlet, fire may result.

- If two or more power cords can be plugged into the wall outlet, the total load must not exceed the rating of the wall outlet.

  If excessive current flows in the wall outlet, fire may result.

- Make sure the power cord is plugged in the wall outlet securely.

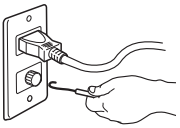
  Contact problems may lead to increased resistance, overheating, and the risk of fire.



- Check whether the product is grounded properly.

  If current leakage occurs in an ungrounded product, you may suffer electric shock while operating the product.

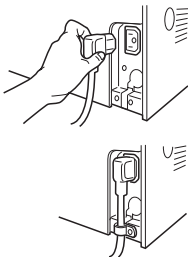
  Connect power plug to grounded wall outlet.



Power Plug and Cord

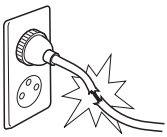
⚠ WARNING

- When using the power cord set (inlet type) that came with this product, make sure the connector is securely inserted in the inlet of the product.
  When securing measure is provided, secure the cord with the fixture properly.
  If the power cord (inlet type) is not connected to the product securely, a contact problem may lead to increased resistance, overheating, and risk of fire.

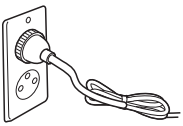


- Check whether the power cord is not stepped on or pinched by a table and so on.
  Overheating may occur there, leading to a risk of fire.

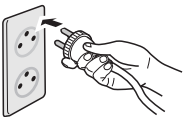
- Check whether the power cord is damaged. Check whether the sheath is damaged.
  If the power plug, cord, or sheath is damaged, replace with a new power cord (with plug and connector on each end) specified by KMBT. Using the damaged power cord may result in fire or electric shock.



- Do not bundle or tie the power cord.
  Overheating may occur there, leading to a risk of fire.

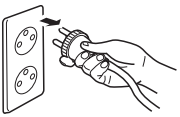


- Check whether dust is collected around the power plug and wall outlet.
  Using the power plug and wall outlet without removing dust may result in fire.



- Do not insert the power plug into the wall outlet with a wet hand.
  The risk of electric shock exists.

- When unplugging the power cord, grasp the plug, not the cable.
  The cable may be broken, leading to a risk of fire and electric shock.

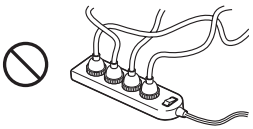


Wiring

⚠ WARNING

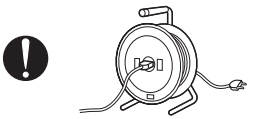
- Never use multi-plug adapters to plug multiple power cords in the same outlet.

  If used, the risk of fire exists.



- When an extension cord is required, use a specified one. Current that can flow in the extension cord is limited, so using a too long extension cord may result in fire.

  Do not use an extension cable reel with the cable taken up. Fire may result.



2. Installation Requirements

Prohibited Installation Places

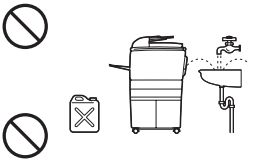
⚠ WARNING

- Do not place the product near flammable materials or volatile materials that may catch fire.

  A risk of fire exists.

- Do not place the product in a place exposed to water such as rain.

  A risk of fire and electric shock exists.

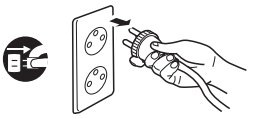


When not Using the Product for a long time

⚠ WARNING

- When the product is not used over an extended period of time (holidays, etc.), switch it off and unplug the power cord.

  Dust collected around the power plug and outlet may cause fire.



Ventilation

⚠ CAUTION

- The product generates ozone gas during operation, but it will not be harmful to the human body.

  If a bad smell of ozone is present in the following cases, ventilate the room.

  a. When the product is used in a poorly ventilated room
  b. When taking a lot of copies
  c. When using multiple products at the same time

Stability

⚠ CAUTION

- Be sure to lock the caster stoppers.

  In the case of an earthquake and so on, the product may slide, leading to a injury.

Inspection before Servicing

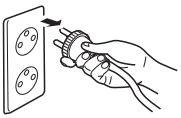
⚠ CAUTION

- Before conducting an inspection, read all relevant documentation (service manual, technical notices, etc.) and proceed with the inspection following the prescribed procedure in safety clothes, using only the prescribed tools. Do not make any adjustment not described in the documentation.

  If the prescribed procedure or tool is not used, the product may break and a risk of injury or fire exists.

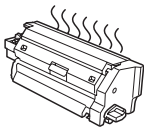
- Before conducting an inspection, be sure to disconnect the power plugs from the product and options.

  When the power plug is inserted in the wall outlet, some units are still powered even if the POWER switch is turned OFF. A risk of electric shock exists.



- The area around the fixing unit is hot.

  You may get burnt.

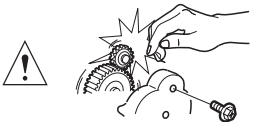


Work Performed with the Product Powered On

⚠ WARNING

- Take every care when making adjustments or performing an operation check with the product powered.

  If you make adjustments or perform an operation check with the external cover detached, you may touch live or high-voltage parts or you may be caught in moving gears or the timing belt, leading to a risk of injury.



- Take every care when servicing with the external cover detached.

  High-voltage exists around the drum unit. A risk of electric shock exists.

Safety Checkpoints

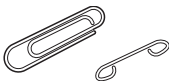
⚠ WARNING

- Check the exterior and frame for edges, burrs, and other damage.

  The user or CE may be injured.

- Do not allow any metal parts such as clips, staples, and screws to fall into the product.

  They can short internal circuits and cause electric shock or fire.



- Check wiring for squeezing and any other damage.

  Current can leak, leading to a risk of electric shock or fire.

- Carefully remove all toner remnants and dust from electrical parts and electrode units such as a charging corona unit.

  Current can leak, leading to a risk of product trouble or fire.

- Check high-voltage cables and sheaths for any damage.

  Current can leak, leading to a risk of electric shock or fire.

Safety Checkpoints

⚠ WARNING

- Check electrode units such as a charging corona unit for deterioration and sign of leakage.

  Current can leak, leading to a risk of trouble or fire.

- Before disassembling or adjusting the write unit (P/H unit) incorporating a laser, make sure that the power cord has been disconnected.

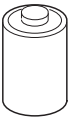
  The laser light can enter your eye, leading to a risk of loss of eyesight.

- Do not remove the cover of the write unit. Do not supply power with the write unit shifted from the specified mounting position.

  The laser light can enter your eye, leading to a risk of loss of eyesight.

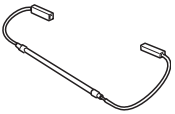
- When replacing a lithium battery, replace it with a new lithium battery specified in the Parts Guide Manual. Dispose of the used lithium battery using the method specified by local authority.

  Improper replacement can cause explosion.



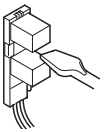
- After replacing a part to which AC voltage is applied (e.g., optical lamp and fixing lamp), be sure to check the installation state.

  A risk of fire exists.



- Check the interlock switch and actuator for loosening and check whether the interlock functions properly.

  If the interlock does not function, you may receive an electric shock or be injured when you insert your hand in the product (e.g., for clearing paper jam).



- Make sure the wiring cannot come into contact with sharp edges, burrs, or other pointed parts.

  Current can leak, leading to a risk of electric shock or fire.

Safety Checkpoints

⚠ WARNING

- Make sure that all screws, components, wiring, connectors, etc. that were removed for safety check and maintenance have been reinstalled in the original location. (Pay special attention to forgotten connectors, pinched cables, forgotten screws, etc.)

  A risk of product trouble, electric shock, and fire exists.

Handling of Consumables

⚠ WARNING

- Toner and developer are not harmful substances, but care must be taken not to breathe excessive amounts or let the substances come into contact with eyes, etc. It may be stimulative.

  If the substances get in the eye, rinse with plenty of water immediately. When symptoms are noticeable, consult a physician.

- Never throw the used cartridge and toner into fire.

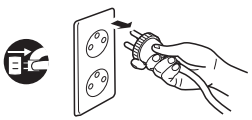
  You may be burned due to dust explosion.

Handling of Service Materials

⚠ CAUTION

- Unplug the power cord from the wall outlet.

  Drum cleaner (isopropyl alcohol) and roller cleaner (acetone-based) are highly flammable and must be handled with care. A risk of fire exists.



- Do not replace the cover or turn the product ON before any solvent remnants on the cleaned parts have fully evaporated.

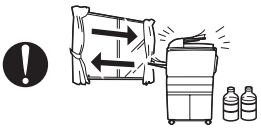
  A risk of fire exists.

Handling of Service Materials

⚠ CAUTION

- Use only a small amount of cleaner at a time and take care not to spill any liquid. If this happens, immediately wipe it off.
  A risk of fire exists.

- When using any solvent, ventilate the room well.
  Breathing large quantities of organic solvents can lead to discomfort.



[4] Used Batteries Precautions

ALL Areas

CAUTION

Danger of explosion if battery is incorrectly replaced.
Replace only with the same or equivalent type recommended by the manufacturer.
Dispose of used batteries according to the manufacturer's instructions.

Germany

VORSICHT!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.
Ersatz nur durch denselben oder einen vom Hersteller empfohlenen gleichwertigen Typ.
Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

France

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.
Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.
Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Denmark

ADVARSEL!

Lithiumbatteri - Eksplosionsfare ved fejlagtig håndtering.
Udskiftning må kun ske med batteri af samme fabrikat og type.
Levér det brugte batteri tilbage til leverandøren.

Finland, Sweden

VAROITUS

Paristo voi räjähtää, jos se on virheellisesti asennettu.
Vaihda paristo ainoastaan laitevalmistajan suosittelemaan tyyppiin.
Hävitä käytetty paristo valmistajan ohjeiden mukaisesti.

VARNING

Explosionsfara vid felaktigt batteribyte.
Använd samma batterityp eller en ekvivalent typ som rekommenderas av apparattillverkaren.
Kassera använt batteri enligt fabrikantens instruktion.

Norway

ADVARSEL

Eksplosjonsfare ved feilaktig skifte av batteri.
Benytt samme batteritype eller en tilsvarende type anbefalt av apparatfabrikanten.
Brukte batterier kasseres i henhold til fabrikantens instruksjoner.

[5] Laser Safety

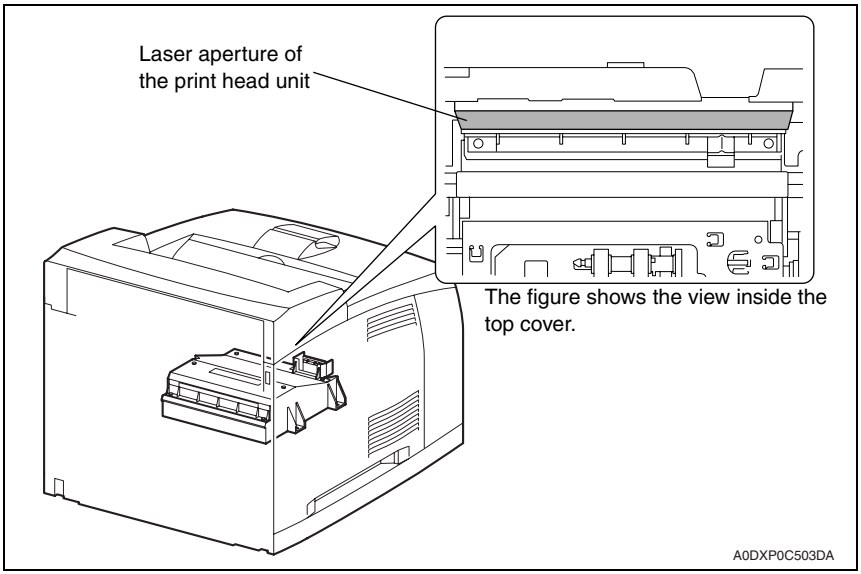
- This is a digital machine certified as a Class 1 laser product. There is no possibility of danger from a laser, provided the machine is serviced according to the instruction in this manual.

5.1 Internal Laser Radiation

semiconductor laser		
Maximum power of the laser diode		10 mW
Maximum average radiation power (*)	pagepro 5650EN	220 µW
	pagepro 4650EN	170 µW
Wavelength		775-800 nm

*at laser aperture of the Print Head Unit

- This product employs a Class 3B laser diode that emits an invisible laser beam. The laser diode and the scanning polygon mirror are incorporated in the print head unit.
- The print head unit is NOT A FIELD SERVICEABLE ITEM. Therefore, the print head unit should not be opened under any circumstances.



U.S.A., Canada
(CDRH Regulation)

- This machine is certified as a Class 1 Laser product under Radiation Performance Standard according to the Food, Drug and Cosmetic Act of 1990. Compliance is mandatory for Laser products marketed in the United States and is reported to the Center for Devices and Radiological Health (CDRH) of the U.S. Food and Drug Administration of the U.S. Department of Health and Human Services (DHHS). This means that the device does not produce hazardous laser radiation.

- The label shown on page S-16 indicates compliance with the CDRH regulations and must be attached to laser products marketed in the United States.

CAUTION
- **Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.**

semiconductor laser	
Maximum power of the laser diode	10 mW
Wavelength	775-800 nm

All Areas

CAUTION
- **Use of controls, adjustments or performance of procedures other than those specified in this manual may result in hazardous radiation exposure.**

semiconductor laser	
Maximum power of the laser diode	10 mW
Wavelength	775-800 nm

Denmark

ADVARSEL
- **Usynlig laserstråling ved åbning, når sikkerhedsafbrydere er ude af funktion. Undgå udsættelse for stråling. Klasse 1 laser produkt der opfylder IEC60825-1 sikkerheds kravene.**

halvlederlaser	
Laserdiodens højeste styrke	10 mW
bølgelængden	775-800 nm

Finland, Sweden

LUOKAN 1 LASERLAITE
KLASS 1 LASER APPARAT

VAROITUS!
- **Laitteen käyttäminen muulla kuin tässä käyttöohjeessa mainitulla tavalla saattaa altistaa käyttäjän turvallisuusluokan 1 ylittävälle näkymättömälle lasersäteilylle.**

puolijohdelaser	
Laserdiodin suurin teho	10 mW
aallonpituus	775-800 nm

VARNING!
- **Om apparaten används på annat sätt än i denna bruksanvisning specificerats, kan användaren utsättas för osynlig laserstrålning, som överskrider gränsen för laserklass 1.**

halvledarlaser	
Den maximala effekten för laserdioden	10 mW
våglängden	775-800 nm

VARO!
- **Avattaessa ja suojalukitus ohitettaessa olet alttiina näkymättomälle lasersäteilylle. Älä katso säteeseen.**

VARNING!
- **Osynlig laserstråining när denna del är öppnad och spärren är urkopplad. Betrakta ej stråien.**

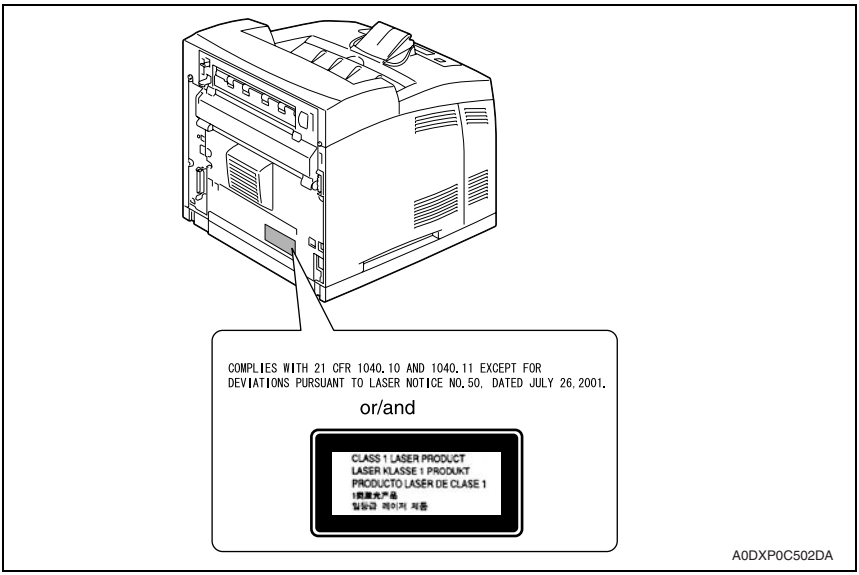
Norway

ADVERSEL
- **Dersom apparatet brukes på annen måte enn spesifisert i denne bruksanvisning, kan brukeren utsettes för unsynlig laserstrålning, som overskrider grensen for laser klass 1.**

halvleder laser	
Maksimal effekt till laserdiode	10 mW
bølgelengde	775-800 nm

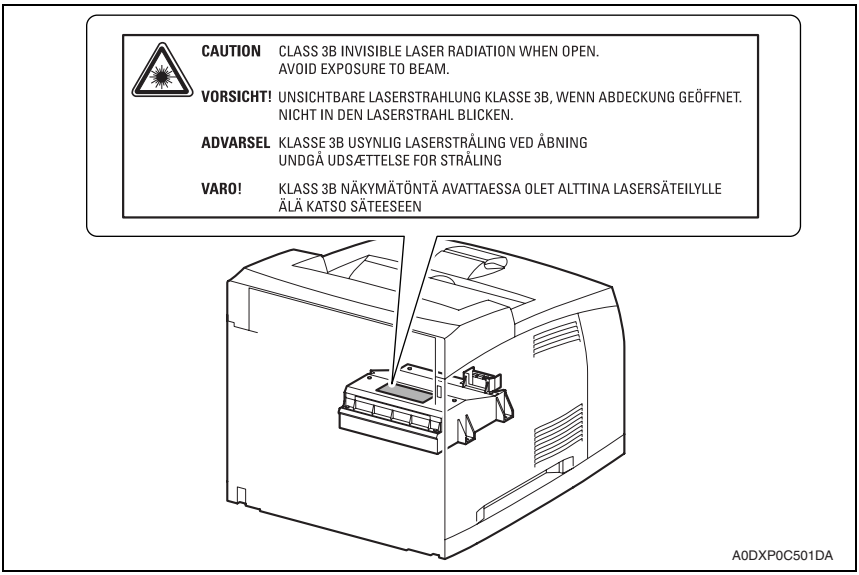
5.2 Laser Safety Label

- A laser safety label is attached to the inside of the machine as shown below.


COMPLIES WITH 21 CFR 1040.10 AND 1040.11 EXCEPT FOR
DEVIATIONS PURSUANT TO LASER NOTICE NO.50, DATED JULY 26, 2001.
or/and
CLASS 1 LASER PRODUCT
LASER KLASSE 1 PRODUKT
PRODUCTO LASER DE CLASE 1
A0DXP0C502DA

5.3 Laser Caution Label

- A laser caution label is attached to the outside of the machine as shown below.

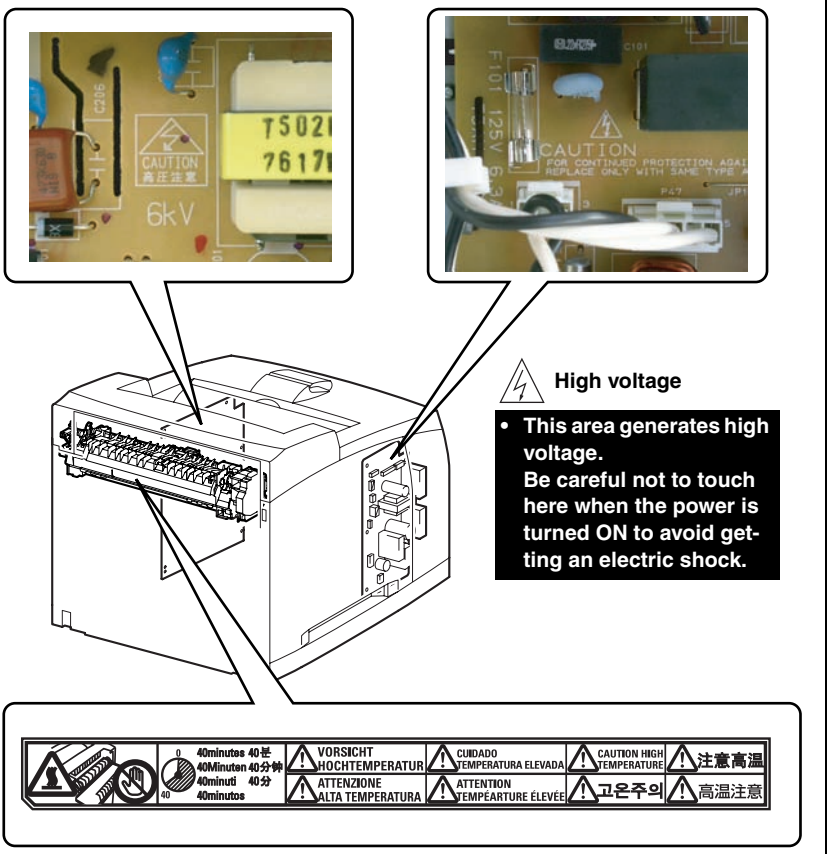

CAUTION CLASS 3B INVISIBLE LASER RADIATION WHEN OPEN.
AVOID EXPOSURE TO BEAM.
VORSICHT! UNSICHTBARE LASERSTRAHLUNG KLASSE 3B, WENN ABDECKUNG GEÖFFNET.
NICHT IN DEN LASERSTRAHL BLICKEN.
ADVARSEL KLASSE 3B USYNLIG LASERSTRÅLING VED ÅBNING
UNDGÅ UDSÆTTELSE FOR STRÅLING
VARO! KLASS 3B NÄKYMÄTÖNTÄ AVATTAESSA OLET ALTTINA LASERSÄTEILYLLE
ÄLÄ KATSO SÄTEESEEN
A0DXP0C501DA

5.4 PRECAUTIONS FOR HANDLING THE LASER EQUIPMENT

- When laser protective goggles are to be used, select ones with a lens conforming to the above specifications.
- When a disassembly job needs to be performed in the laser beam path, such as when working around the printer head and PC drum, be sure first to turn the printer OFF.
- If the job requires that the printer be left ON, take off your watch and ring and wear laser protective goggles.
- A highly reflective tool can be dangerous if it is brought into the laser beam path. Use utmost care when handling tools on the user's premises.
- The Print Head is not to be disassembled or adjusted in the field. Replace the unit or assembly including the control board. Therefore, remove the laser diode, and do not perform control board trimmer adjustment.

WARNING INDICATIONS ON THE MACHINE

Caution labels shown are attached in some areas on/in the machine.
When accessing these areas for maintenance, repair, or adjustment, special care should be taken to avoid burns and electric shock.



High voltage

- **This area generates high voltage. Be careful not to touch here when the power is turned ON to avoid getting an electric shock.**

CAUTION

- **The area around the fuser unit is extremely hot. Touching any part other than those indicated may result in burns.**

A0DXP0C504DA

CAUTION:

- **You may be burned or injured if you touch any area that you are advised not to touch by any caution label. Do not remove caution labels. If any caution label has come off or soiled and therefore the caution cannot be read, contact our Service Office.**

MEASURES TO TAKE IN CASE OF AN ACCIDENT

1. If an accident has occurred, the distributor who has been notified first must immediately take emergency measures to provide relief to affected persons and to prevent further damage.
2. If a report of a serious accident has been received from a customer, an on-site evaluation must be carried out quickly and KMBT must be notified.
3. To determine the cause of the accident, conditions and materials must be recorded through direct on-site checks, in accordance with instructions issued by KMBT.
4. For reports and measures concerning serious accidents, follow the regulations specified by every distributor.

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Composition of the service manual

This service manual consists of Theory of Operation section and Field Service section to explain the main machine and its corresponding options.

Theory of Operation section gives, as information for the CE to get a full understanding of the product, a rough outline of the object and role of each function, the relationship between the electrical system and the mechanical system, and the timing of operation of each part.

Field Service section gives, as information required by the CE at the site (or at the customer's premise), a rough outline of the service schedule and its details, maintenance steps, the object and role of each adjustment, error codes and supplementary information.

The basic configuration of each section is as follows. However some options may not be applied to the following configuration.

<Theory of Operation section>

OUTLINE:	Explanation of system configuration, product specifications, unit configuration, and paper path
COMPOSITION/OPERATION:	Explanation of configuration of each unit, operating system, and control system

<Field service section>

GENERAL:	Explanation of system configuration, and product specifications
MAINTENANCE:	Explanation of service schedule, maintenance steps, service tools, removal/reinstallation methods of major parts, and firmware version up method etc.
ADJUSTMENT/SETTING:	Explanation of utility mode, service mode, and mechanical adjustment etc.
TROUBLESHOOTING:	Explanation of lists of jam codes and error codes, and their countermeasures etc.
APPENDIX:	Parts layout drawings, connector layout drawings, timing chart, overall layout drawing are attached.

Notation of the service manual

A. Product name

In this manual, each of the products is described as follows:

(1)	pagepro 5650EN/4650EN	Main body
(2)	Microsoft Windows 95:	Windows 95
	Microsoft Windows 98:	Windows 98
	Microsoft Windows Me:	Windows Me
	Microsoft Windows NT 4.0:	Windows NT 4.0 or Windows NT
	Microsoft Windows 2000:	Windows 2000
	Microsoft Windows XP:	Windows XP
	Microsoft Windows Vista:	Windows Vista
	When the description is made in combination of the OS's mentioned above:	
		Windows 95/98/Me
		Windows NT 4.0/2000
		Windows NT/2000/XP/Vista
		Windows 95/98/Me/ NT/2000/XP/Vista

B. Brand name

The company names and product names mentioned in this manual are the brand name or the registered trademark of each company.

C. Feeding direction

- When the long side of the paper is parallel with the feeding direction, it is called short edge feeding. The feeding direction which is perpendicular to the short edge feeding is called the long edge feeding.
- Short edge feeding will be identified with [S (abbreviation for Short edge feeding)] on the paper size. No specific notation is added for the long edge feeding.
  When the size has only the short edge feeding with no long edge feeding, [S] will not be added to the paper size.

<Sample notation>

Paper size	Feeding direction	Notation
A4	Long edge feeding	A4
	Short edge feeding	A4S
A3	Short edge feeding	A3

KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

pagepro 5650EN/4650EN

Main body

2007.11

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.
Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a section revised, show to the left of the revised section.
  A number within represents the number of times the revision has been made.

- To indicate clearly a section revised, show in the lower outside section of the corresponding page.
  A number within represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
  The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
  The revision marks for Ver. 2.0 are left as they are.

Date	Service manual Ver.	Revision mark	Descriptions of revision
2007/11	1.0	—	Issue of the first edition

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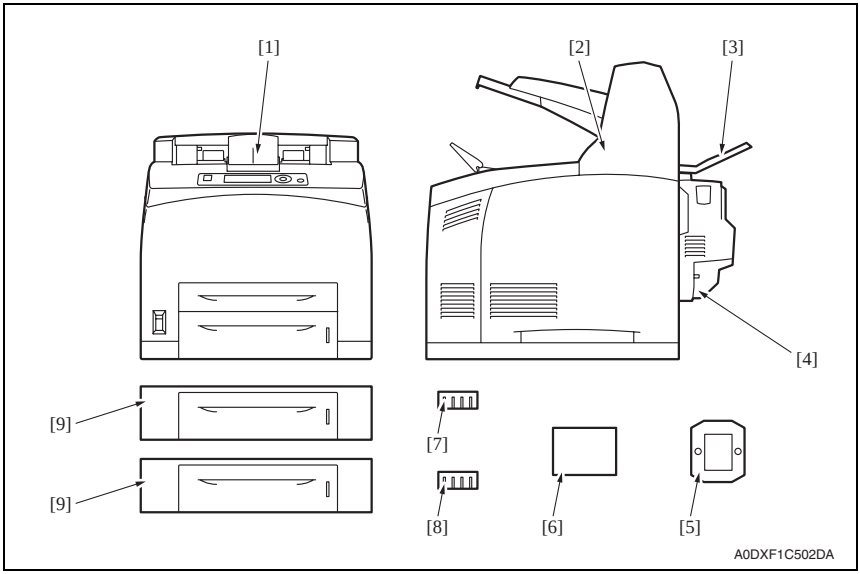
General

1. System configuration

A. pagepro 5650EN

System front view

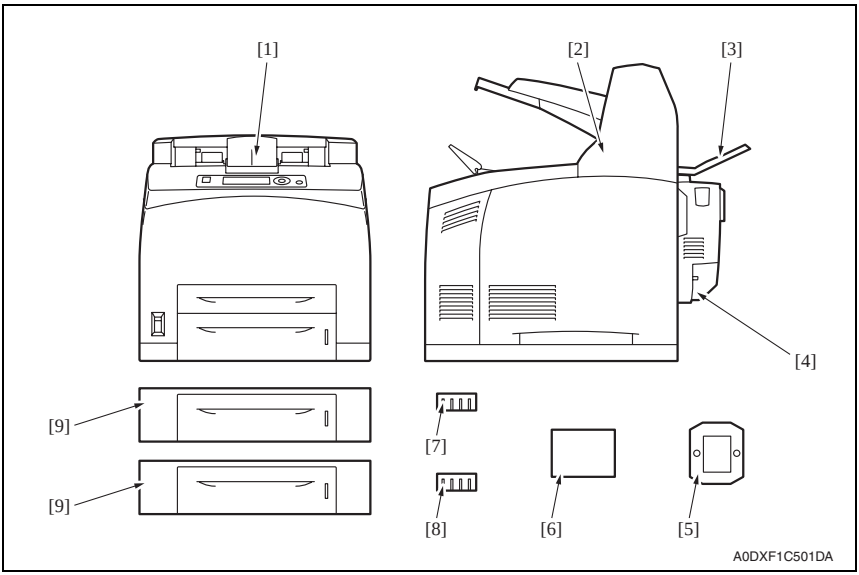


[1] Main body
[2] Offset tray
[3] Face up tray *1
[4] Duplex (for pagepro 5650EN)
[5] CF adapter
[6] Hard disk kit
[7] DIMM (128 MB)
[8] DIMM (256 MB)
[9] Lower feeder unit (for pagepro 5650EN)

*1: Standard equipment

B. pagepro 4650EN

System front view



[1] Main body
[2] Offset tray
[3] Face up tray
[4] Duplex (for pagepro 4650EN)
[5] CF adapter
[6] Hard disk kit
[7] DIMM (128 MB)
[8] DIMM (256 MB)
[9] Lower feeder unit (for pagepro 4650EN)

2. Product specifications

A. Type

Type	Desktop A4 laser beam printer
Printing system	Semiconductor laser beam scanning system
Exposure system	Laser diode and polygon mirror scanning
PC drum type	OPC (organic photo conductor)
Toner cartridge type	The toner cartridge contains an OPC drum, a developing roller and blade, a primary charge roller, a drum cleaner, consumable memory device and the toner.
Print resolution	600 dpi x 600 dpi x 1 bit 1200 dpi x 1200 dpi x 1 bit
Media feeding system	Two-way system (tray 1: 150 sheets, tray 2: 550 sheets) * Expandable up to a four-way system by adding lower feeder units (up to two)
Developing system	Electro photographic system (roller charging, single component magnetic toner development)
Charging system	Roller charging system
Fusing system	Thermal fusing system by a heated roller
Media exit system	Face down (exit tray capacity: A4S/Letter, 500 sheets)

B. Functions

Warm-up time	Average: 20 sec. or less (Power on to ready, at ambient temperature of 22° C/71.6° F and rated source voltage)		
Process speed	pagepro 5650EN	269.0 mm/sec	
	pagepro 4650EN	204.0 mm/sec	
First print output time *1	pagepro 5650EN	Simplex	9.4 sec. (A4S/Letter S, plain paper)
		Duplex	12.6 sec. (Letter S, plain paper) 12.7 sec. (A4S, plain paper)
	pagepro 4650EN	Simplex	10.2 sec. (A4S/Letter S, plain paper)
		Duplex	14.0 sec. (Letter S, plain paper) 14.2 sec. (A4S, plain paper)
Print speed	pagepro 5650EN	Simplex	43.0 pages/min. (A4S, plain paper) 45.1 pages/min. (Letter S, plain paper)
		Duplex	26.4 pages/min. (A4S, plain paper) 27.2 pages/min. (Letter S, plain paper)
	pagepro 4650EN	Simplex	34.0 pages/min. (A4S, plain paper) 35.7 pages/min. (Letter S, plain paper)
		Duplex	20.9 pages/min. (A4S, plain paper) 21.5 pages/min. (Letter S, plain paper)

Media sizes *2	Letter/Legal/Statement/Executive/A4/A5/A6/B5 (JIS)/B6/Folio/SP Folio/ Foolscap/UK Quarto/Government Letter/Government Legal/16K/Kai 16/Kai 32/ Japanese Postcard/Japanese Postcard-D/B5 (ISO)/Envelope #10/Envelope DL/Envelope C5/Envelope C6/Envelope Chou #3/Envelope Monarch/Envelope You #4/Envelope Chou #4/Custom size	
	Tray 1	Width: 76.2 to 215.9 mm (3.0 to 8.5 inches) Length: 127.0 to 900 mm (5.0 to 35.43 inches) **NOTE** • **Image quality of media length: 356 to 900 mm isn't guaranteed.**
	Tray 2	Width: 98.4 to 215.9 mm (3.87 to 8.5 inches) Length: 148.0 to 355.6 mm (5.83 to 14.0 inches)
Media types	• Plain paper pagepro 5650EN: 68 to 105 g/m²; 18.13 to 28 lb pagepro 4650EN: 60 to 105 g/m²; 16 to 28 lb • Recycled paper pagepro 5650EN: 68 to 105 g/m²; 18.13 to 28 lb pagepro 4650EN: 60 to 105 g/m²; 16 to 28 lb • OHP transparencies • Envelopes • Labels • Thick 1 (106 to 159 g/m²; 28.27 to 42.4 lb) • Thick 2 (160 to 216 g/m²; 42.67 to 57.6 lb) • Thick 3 (106 to 216 g/m²; 28.27 to 57.6 lb) *3 • Postcards • Thin paper *3	
Tray capacities	Tray 1	Plain/Recycled paper: 150 sheets Transparency: 100 sheets Envelope: 15 sheets Labels: 100 sheets Thick paper: 60 sheets Postcard: 55 sheets Banner paper: 1 sheet
	Tray 2	Plain/Recycled paper: 550 sheets Transparency: 100 sheets Envelope: 80 sheets Labels: 290 sheets Thick paper: 160 sheets Postcard: 200 sheets
Interfaces	• Parallel (IEEE 1284) support only an ECP mode • 10 Base-T/100 Base-TX/1000 Base-T Ethernet • USB 2.0 (High-Speed) • Host USB (USB device printing)	
CPU	Marvell Orion II, 500 MHz	
Standard memory	DDRII-SDRAM 128 MB	
Hard disk	Optional: 40 GB	

*1: First print output time is defined as the time from when the printer receives a printing start signal in the READY state until a single media is printed and delivered to the output tray.

*2: Plain paper and recycle paper are unsupported paper types with printing in A6, envelope #10, envelope C6, envelope DL, envelope monarch, envelope youkei #4, envelope choukei #3, youkei 0, envelope choukei #4, japanese postcard, or custom size of 120 mm (width) or less.

*3: pagepro 5650EN only

C. Maintenance

Machine durability	1,000,000 prints or 5 years, whichever comes first

D. Machine specifications

Power requirements Voltage:	AC 110 to 127 V, -10 % +6 % (AC 120 V -10 % +10 %: only US/Canada) AC 220 to 240 V, -10 % +10 %	
Frequency:	50 to 60 Hz ± 3 Hz	
Max power consumption	pagepro 5650EN	110 V: 1,015W or less 220 V: 1,015W or less
	pagepro 4650EN	110 V: 1,240W or less 220 V: 1,300W or less
Dimensions	421.8 mm (W) x 465.4 mm (D) x 404.3 mm (H) 16.6 inch (W) x 18.3 inch (D) x 15.9 inch (H)	
Weight	29.0 kg (46.4 lb) without consumables	
Operating noise	pagepro 5650EN	During standby : 56.1 dB (A) or less During printing : 28.0 dB (A) or less
	pagepro 4650EN	During standby : 53.6 dB (A) or less During printing : 27.0 dB (A) or less

E. Operating Environment

Temperature	10 to 35° C / 50 to 95° F (with a fluctuation of 10° C / 18° F or less per hour)
Humidity	15% to 85% (with a fluctuation of 20 %/h)

NOTE

- **These specifications are subject to change without notice.**

Blank Page

Maintenance

3. Periodical check

3.1 Maintenance items

3.1.1 Parts to be replaced by users (CRU)

No	Class	Part to be replaced	Number of prints *1	Clean	Replace	Description
1	Processing section	Standard-capacity toner cartridge *2	10,000		●	
2		High-capacity toner cartridge *2	17,000		●	
3	Tray 1	Feed roller assy *3	200,000		●	
4		Pick-up roller assy *3	200,000		●	
5		Separation roller assy *3	200,000		●	
6	Tray 2	Feed roller assy *3	200,000		●	
7		Pick-up roller assy *3	200,000		●	
8		Separation roller assy *3	200,000		●	
9	Transfer section	Transfer roller *3	200,000		●	
10	Fusing section	Fuser unit *3	200,000		●	
11	Lower feeder unit	Feed roller assy *3	200,000		●	
12		Pick-up roller assy *3	200,000		●	
13		Separation roller assy *3	200,000		●	

*1: Continuous printing, B/W ratio: 5 %
*2: The life of the toner cartridge furnished with the machine at the time of shipment is 6,000 printed pages
*3: These parts are included in the maintenance kit, and replaced at the same time.

3.2 Maintenance parts

- To ensure that the machine produces good prints and to extend its service life, it is recommended that the maintenance jobs described in this schedule be carried out as instructed.
- The replacing time is to be determined by the total counter value.
- Maintenance conditions are based on A4S or letter S,1-side print.

3.2.1 Replacement parts

No	Maintenance parts	Quantity	Actual durable cycle *1	Parts No.	Descriptions	Ref.page
1	Maintenance kit *3	1	200,000	A0FM012	for 4650EN, 110 V areas	P.10 *2
				A0FM0Y2	for 4650EN, 220 V areas	
				A0FM011	for 5650EN, 110 V areas	
				A0FM0Y1	for 5650EN, 220 V areas	

*1: Continuous printing, B/W ratio: 5 %
*2: For details about maintenance procedure of lower feeder unit, see the optional lower feeder unit service manual.
*3: The following parts are included in maintenance kit.

Item name	Quantity
Roller assy (for feed roller assy, pick-up roller assy and separation roller assy)	12
Transfer roller	1
Fuser unit	1

3.3 Concept of parts life

3.3.1 Conditions for life specifications values

- The life specification values represent the number of pages printed or figures equivalent to it when given conditions (see the table given below) are met. They can be more or less depending on the machine operating conditions of each individual user.

Item	Description
Job type	Continuous printing
Media size	A4 S or letter S
Original density	B/W ratio: 5 %

3.4 Maintenance procedure (periodical check parts)

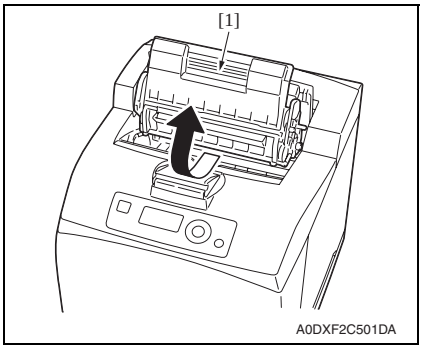
3.4.1 Replacing the toner cartridge

A. Periodically replaced parts/cycle

- Standard-capacity toner cartridge: Every 10,000 prints
- High-capacity toner cartridge: Every 17,000 prints

B. Removal procedure

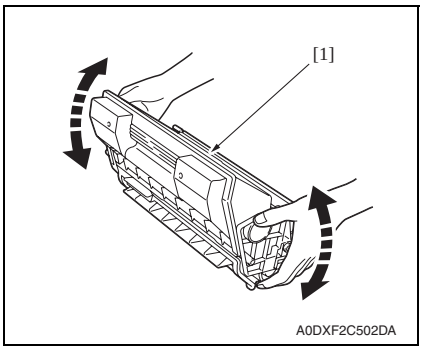
1. Open the top cover.



2. Hold the toner cartridge [1] by the grip, and then pull it out slowly.

C. Reinstallation procedure

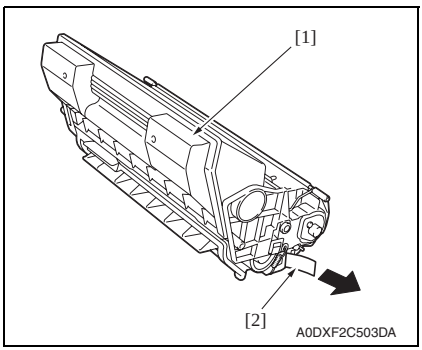
1. Take the new toner cartridge out of the box.



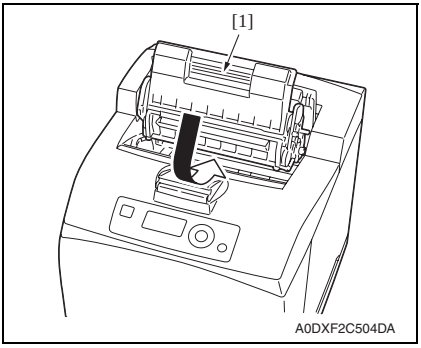
2. Holding it firmly with both hands, rock the toner cartridge [1] left and right, forward and backward, to distribute the toner evenly.

NOTE

- **Do not touch the photo conductor of the toner cartridge; otherwise image quality may decrease.**



3. Placing the toner cartridge [1] on a flat surface, pull out the protective seal [2] horizontally.



4. Hold the toner cartridge [1] by the grip, and then insert it into the slot inside the printer.

5. Close the top cover securely.

NOTE

- **When removing or reinstalling the toner cartridge while it is being used or after it has been used up, do not hold, stand or store cartridge on their ends or turn them upside down; the toner inside the cartridge may become caked or unequally distributed.**

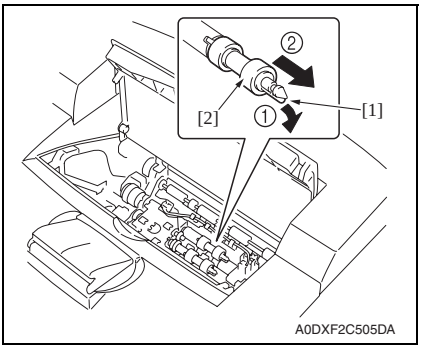
3.4.2 Replacing the tray 1 feed roller assy

A. Periodically replaced parts/cycle

- Tray 1 feed roller assy: Every 200,000 prints

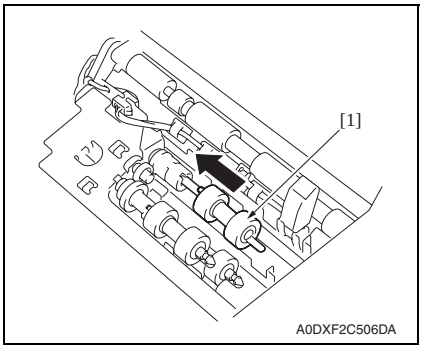
B. Removal procedure

1. Remove the toner cartridge.
See P.22

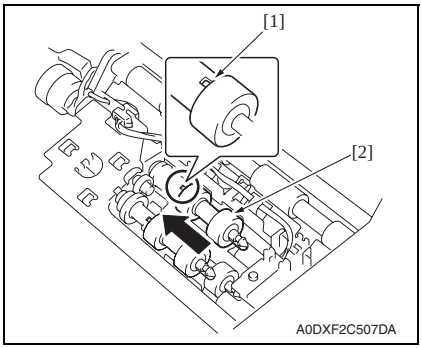


2. While pushing down the shaft of the feed roller assy, widen the tab [1] of the feed roller assy to loosen it and then slowly remove the feed roller assy [2] from the shaft on the tray.

C. Reinstall procedure



1. Hold the tab on the new feed roller assy [1] and slowly push it into the shaft on the tray.



2. Aligning the small tabs [1] on the feed roller assy with the slots of the shaft, push the feed roller assy [2] completely in so that the tab fits into the slot.

3. Reinstall the toner cartridge.

4. Close the top cover securely.

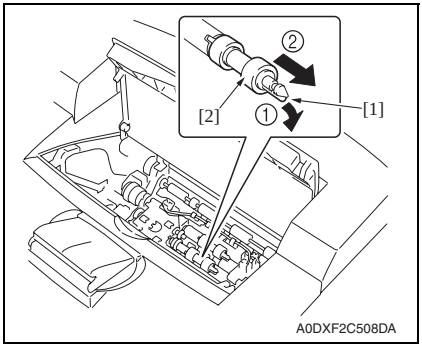
3.4.3 Replacing the tray 1 pick-up roller assy

A. Periodically replaced parts/cycle

- Tray 1 pick-up roller assy: Every 200,000 prints

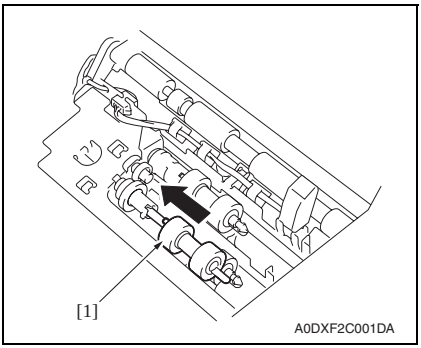
B. Removal procedure

1. Remove the toner cartridge.
See P.22

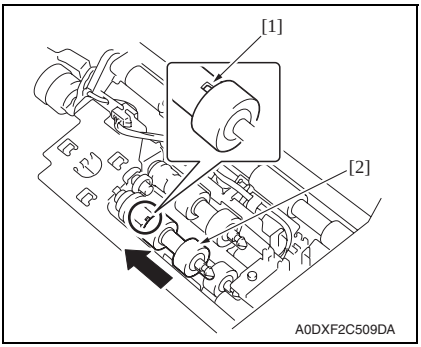


2. While pushing down the shaft of the pick-up roller assy, widen the tab [1] of the pick-up roller assy to loosen it and then slowly remove the pick-up roller assy [2] from the shaft on the tray.

C. Reinstall procedure



1. Hold the tab on the new pick-up roller assy [1] and slowly push it into the shaft on the tray.



2. Aligning the small tabs [1] on the pick-up roller assy with the slots of the shaft, push the pick-up roller assy [2] completely in so that the tab fits into the slot.

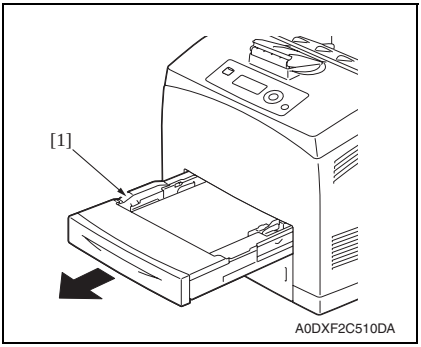
3. Reinstall the toner cartridge.
4. Close the top cover securely.

3.4.4 Replacing the tray 1 separation roller assy

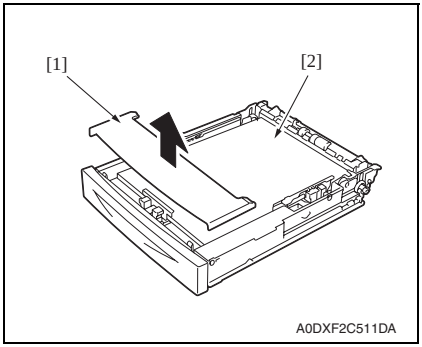
A. Periodically replaced parts/cycle

- Tray 1 separation roller assy: Every 200,000 prints

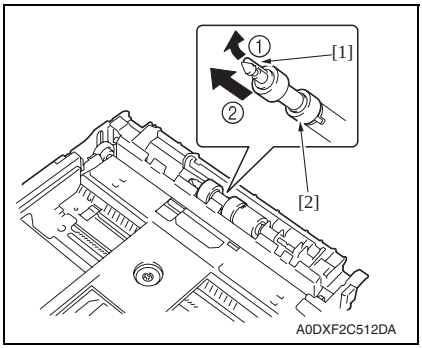
B. Removal procedure



1. Pull the tray 1 [1] out of the printer.

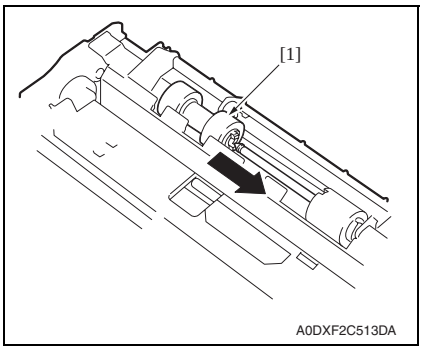


2. Remove the lid [1] of the tray 1.
3. Remove any media [2] in the tray 1.

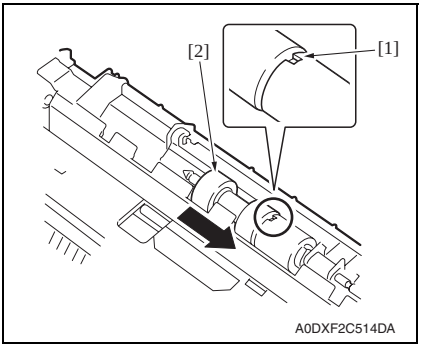


4. While pushing down the shaft of the separation roller assy, widen the tab [1] of the separation roller assy to loosen it and then slowly remove the separation roller assy [2] from the shaft on the tray.

C. Reinstall procedure



1. Hold the tab on the new separation roller assy [1] and slowly push it into the shaft on the tray.



2. Aligning the small tabs [1] on the separation roller assy with the slots of the shaft, push the separation roller assy [2] completely in so that the tab fits into the slot.

3. Load the media face up in the tray 1.
4. Reattach the lid of the tray 1.
5. Push the tray 1 completely into the printer.

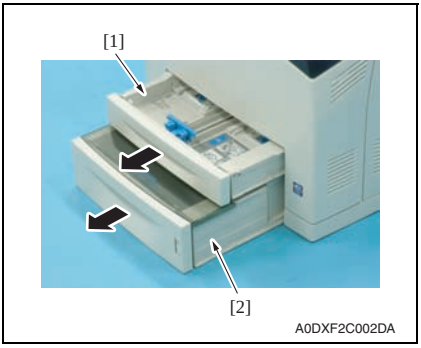
3.4.5 Replacing the tray 2 feed roller assy

A. Periodically replaced parts/cycle

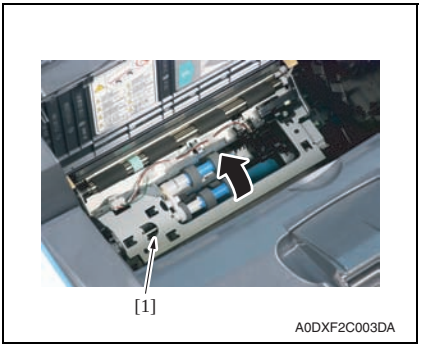
- Tray 2 feed roller assy: Every 200,000 prints

B. Removal procedure

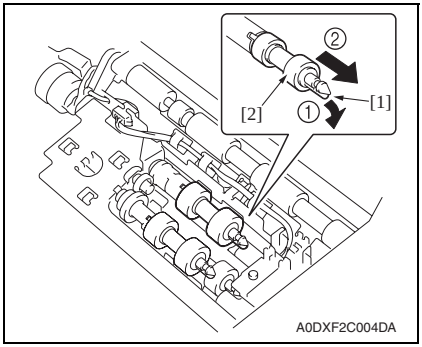
1. Remove the toner cartridge.
See P.22



2. Pull the tray 1 [1] and tray 2 [2] out of the printer.

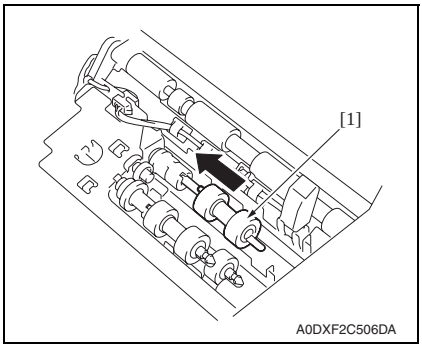


3. Raise the tray 1 feed unit [1] upward.

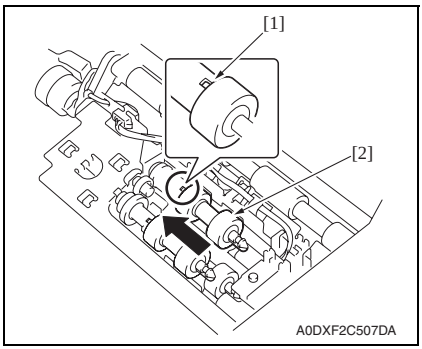


4. While pushing down the shaft of the feed roller assy, widen the tab [1] of the feed roller assy to loosen it and then slowly remove the feed roller assy [2] from the shaft on the tray.

C. Reinstall procedure



1. Hold the tab on the new feed roller assy [1] and slowly push it into the shaft on the tray.



2. Aligning the small tabs [1] on the feed roller assy with the slots of the shaft, push the feed roller assy [2] completely in so that the tab fits into the slot.

3. Push the tray 1 and 2 completely into the printer.
4. Reinstall the toner cartridge.
5. Close the top cover securely.

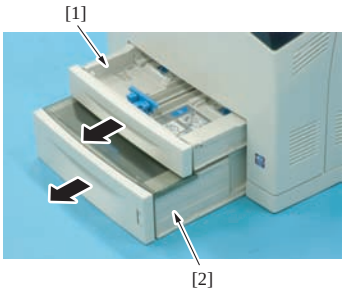
3.4.6 Replacing the tray 2 pick-up roller assy

A. Periodically replaced parts/cycle

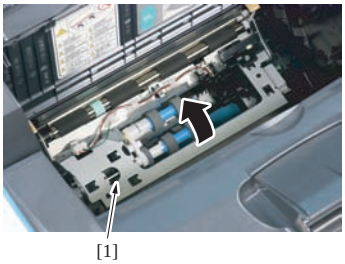
- Tray 2 pick-up roller assy: Every 200,000 prints

B. Removal procedure

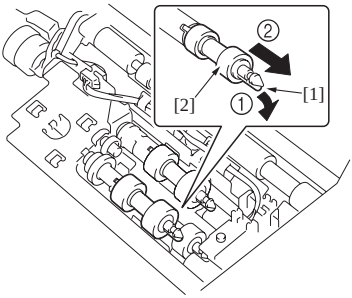
1. Remove the toner cartridge.
See P.22



2. Pull the tray 1 [1] and tray 2 [2] out of the printer.

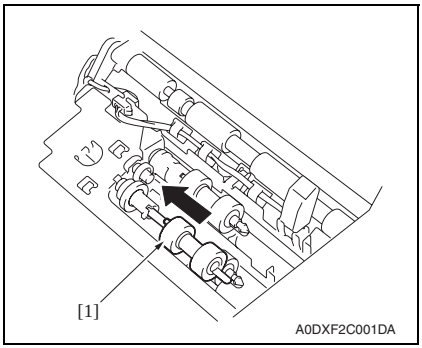


3. Raise the tray 1 feed unit [1] upward.

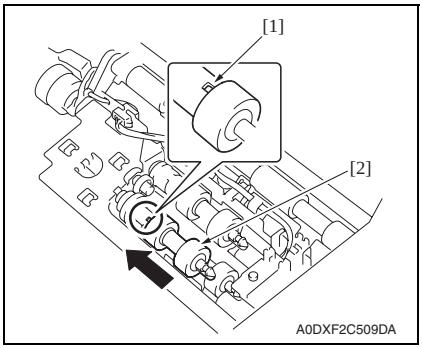


4. While pushing down the shaft of the pick-up roller assy, widen the tab [1] of the pick-up roller assy to loosen it and then slowly remove the pick-up roller assy [2] from the shaft on the tray.

C. Reinstall procedure



1. Hold the tab on the new pick-up roller assy [1] and slowly push it into the shaft on the tray.



2. Aligning the small tabs [1] on the pick-up roller assy with the slots of the shaft, push the pick-up roller assy [2] completely in so that the tab fits into the slot.

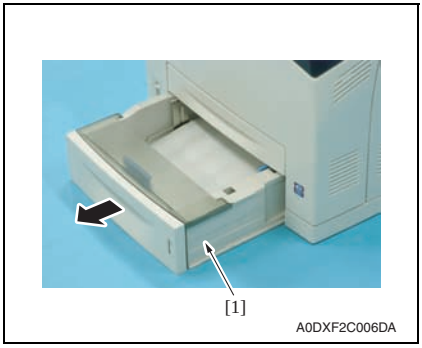
3. Push the tray 1 and 2 completely into the printer.
4. Reinstall the toner cartridge.
5. Close the top cover securely.

3.4.7 Replacing the tray 2 separation roller assy

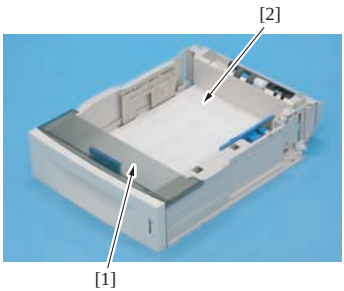
A. Periodically replaced parts/cycle

- Tray 2 separation roller assy: Every 200,000 prints

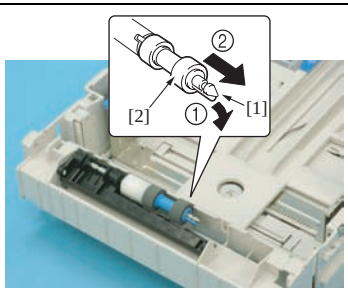
B. Removal procedure



1. Pull the tray 2 [1] out of the printer.

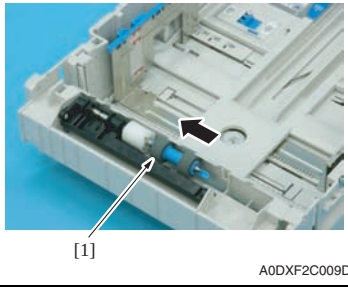


2. Remove the lid [1] of the tray 2.
3. Remove any media [2] in the tray 2.

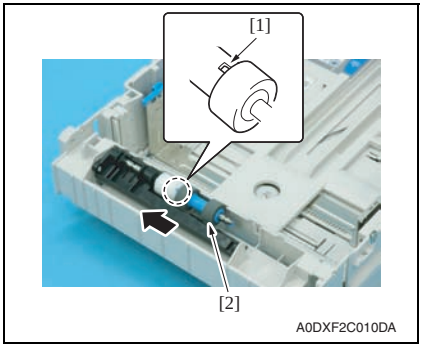


4. While pushing down the shaft of the separation roller assy, widen the tab [1] of the separation roller assy to loosen it and then slowly remove the separation roller assy [2] from the shaft on the tray.

C. Reinstall procedure



1. Hold the tab on the new separation roller assy [1] and slowly push it into the shaft on the tray.



2. Aligning the small tabs [1] on the separation roller assy with the slots of the shaft, push the separation roller assy [2] completely in so that the tab fits into the slot.

3. Load the media face up in the tray 2.
4. Reattach the lid of the tray 2.
5. Push the tray 2 completely into the printer.

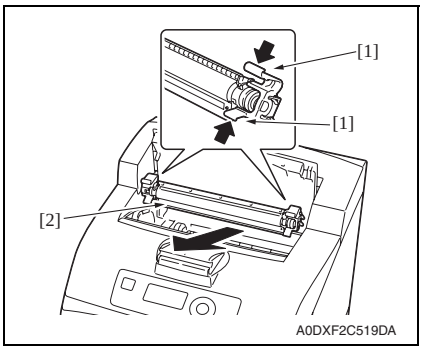
3.4.8 Replacing the transfer roller

A. Periodically replaced parts/cycle

- Transfer roller: Every 200,000 prints

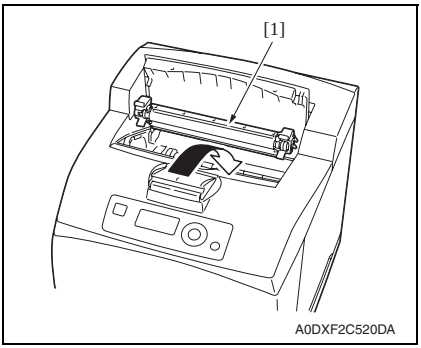
B. Removal procedure

1. Remove the toner cartridge.
See P.9



2. Pull the 2 levers [1] on the upper part of the transfer roller, then squeeze the 2 levers on the bottom of the transfer roller [2] and pull it out slowly towards you.

C. Reinstall procedure



1. Pick up the new transfer roller [1] by the levers at both ends, and then slot it in slowly.

2. Reinstall the toner cartridge.
3. Close the top cover securely.

3.4.9 Replacing the fuser unit

⚠ CAUTION

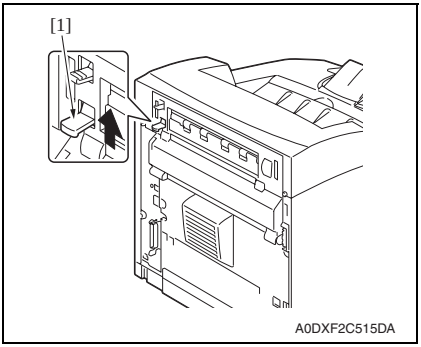
- **The temperature gets high in the vicinity of the fuser unit. You may get burned when you come into contact with the area. Before replacement operations, make sure that more than 20 minutes have elapsed since the main and sub power switches were turned off.**

A. Periodically replaced parts/cycle

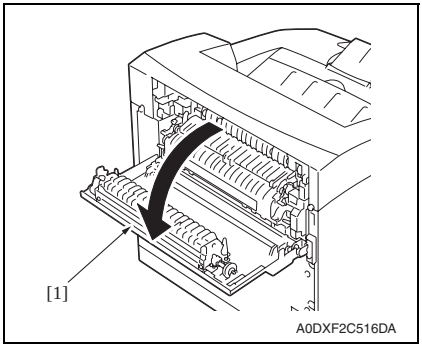
- Fuser unit: Every 200,000 prints

B. Procedure

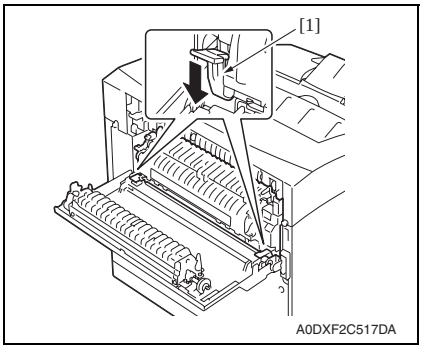
1. Turn OFF the power switch, unplug the power cord from the power outlet, and let the machine to stand idle for about 20 min.



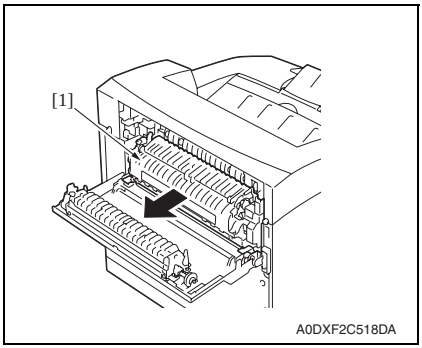
2. Lift the lever [1].



3. Open the rear cover [1].



4. Pull down the 2 levers [1] at the bottom of the fuser unit.



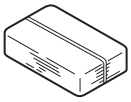
5. Remove the fuser unit [1] slowly.

6. Install the new fuser unit.

7. From the Menu, select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT] and execute this function to reset the fuser unit counter value.
See P.145

4. Service tool

4.1 Service material list

Name	Shape	Material No.	Remarks
Cleaning pad	 A02EF2C526DA	000V-18-1	10pcs/1pack
Isopropyl alcohol	A00KF2C506DA	—	

4.2 Consumable parts

4.2.1 Toner cartridge

Part name	Life expectancy
Standard-capacity toner cartridge	10,000 prints
High-capacity toner cartridge	17,000 prints

For the predetermined conditions, See P.8

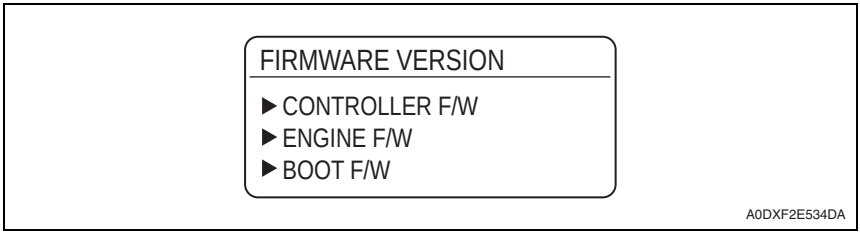
NOTE

- **The life of the toner cartridges furnished with the machine at the time of shipment is 6,000 prints.**

5. Firmware upgrade

5.1 Checking the current firmware version

1. Display [SERVICE MENU].
2. Display [FIRMWARE VERSION].



3. Select the firmware to be updated and check the current version.
See P.137

5.2 Firmware upgrading procedure by USB memory device

5.2.1 Preparations for firmware upgrading

A. System requirements

- PC equipped with a USB port
- USB memory device

B. Saving the firmware data into the USB memory device

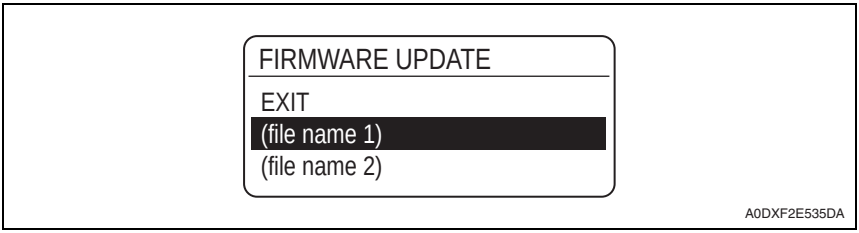
1. Save the firmware data in appropriate space in the PC.
2. Connect the USB memory device to the PC.
3. Create a “firmware” folder immediately under the drive of the USB memory device.
4. Copy the firmware data (***.exe) in the firmware folder created in step 3.

NOTE

- **Be sure to save the firmware data in “drive:/firmware/***.exe.”**
- **The printer can display up to 20 files of firmware data during upgrading.**

C. How to write firmware data

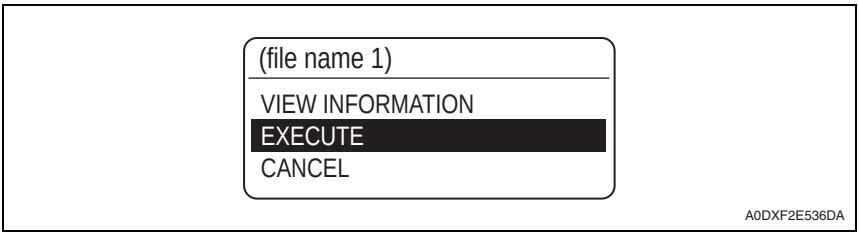
1. Turn the power switch ON.
2. Connect the USB memory device to the printer.
3. Call the SERVICE MENU to the display.
   See P.137
4. Select [FIRMWARE UPDATE] and press the Menu/Select key.
   A list of firmware data in the USB memory device is displayed.



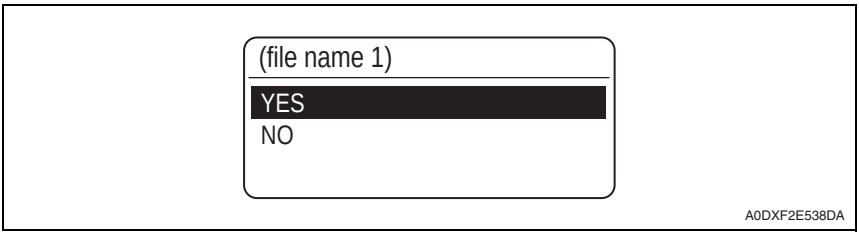
NOTE

- **Before upgrading firmware, use [VIEW INFORMATION] to check that the firmware data is correct.**
  See P.147

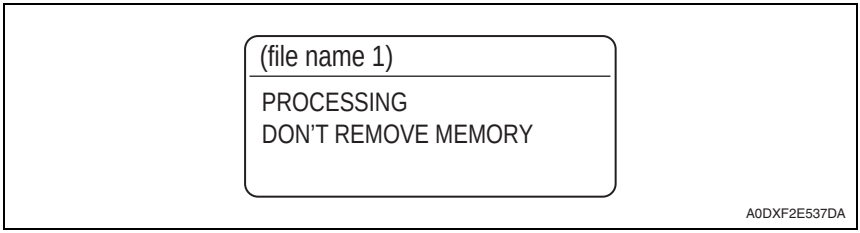
5. Select the specific firmware data to be upgraded and press the Menu/Select key.
6. Select [EXECUTE] and press the Menu/Select key.



7. Select [YES] and press the Menu/Select key.



8. The firmware upgrading procedure starts.



NOTE

- **NEVER disconnect the USB memory device from the printer during the firmware upgrading procedure.**

9. The printer is automatically restarted as soon as the firmware is upgraded correctly.

5.3 Firmware upgrading procedure by updater

5.3.1 Updating method

- To update the firmware, perform “Firmware Updater.”

A. System requirements

Computer	Windows	• PC with a Pentium 2,400 MHz or faster processor (A Pentium 3,500 MHz or faster processor is recommended.)
	Macintosh	• Apple Macintosh computer with a PowerPC G3 or later processor (A PowerPC G4 or later is recommended.)
OS	Windows	• Microsoft Windows XP Home Edition/Professional, Windows 2000
	Macintosh	• MacOS X 10.2 or later (We recommend installing the newest patch.)
Available hard disk space	Windows	• Approximately 20 to 26 MB
	Macintosh	• Approximately 30 to 42 MB
Memory		• 128 MB or more
Interface	Windows	• 10Base-T/100Base-TX/1000Base-T Ethernet • USB 2.0 (High Speed) compliant • Parallel (IEEE 1284)
	Macintosh	• 10Base-T/100Base-TX/1000Base-T Ethernet

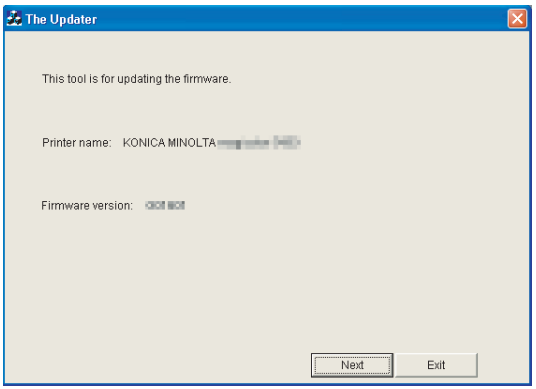
B. Connection for Windows

(1) Starting the firmware updater

NOTE

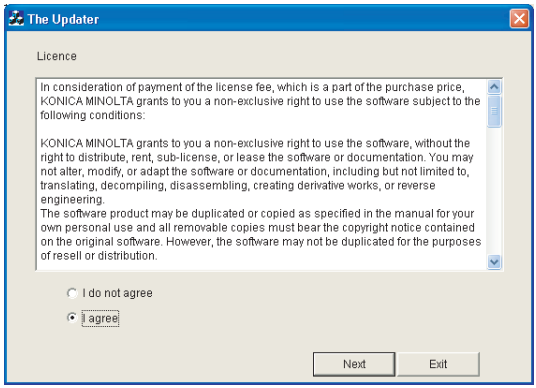
- **Before starting the firmware updater, turn on the printer, and make sure that it is correctly connected.**

1. Download the firmware updater.
2. Double-click “xxx.exe.”
3. The printer name and firmware version are displayed. Click the [Next].



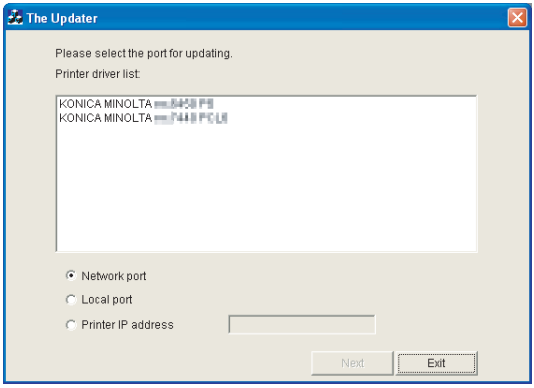
A0DXF2E539DA

4. The license agreement is displayed. Select “I agree”, and then click the [Next].


The Updater
Licence
In consideration of payment of the license fee, which is a part of the purchase price, KONICA MINOLTA grants to you a non-exclusive right to use the software subject to the following conditions:
KONICA MINOLTA grants to you a non-exclusive right to use the software, without the right to distribute, rent, sub-license, or lease the software or documentation. You may not alter, modify, or adapt the software or documentation, including but not limited to, translating, decompiling, disassembling, creating derivative works, or reverse engineering.
The software product may be duplicated or copied as specified in the manual for your own personal use and all removable copies must bear the copyright notice contained on the original software. However, the software may not be duplicated for the purposes of resell or distribution.
I do not agree
I agree
Next
Exit

A011F2E556DA

5. The list of printer drivers is displayed. Select the appropriate connection for the environment where the printer is being used.



A0DXF2E540DA

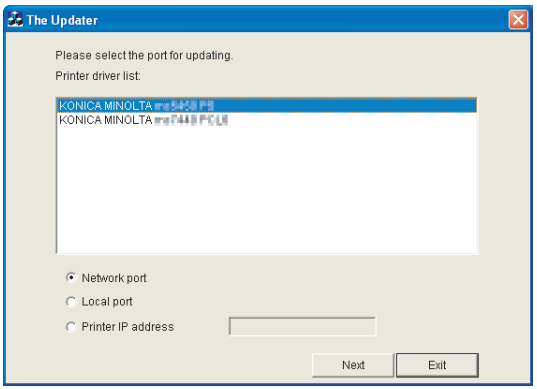
- For a network connection: Select “Network port.”
  See P.28
- For a local connection: Select “Local port.”
  See P.30
- When specifying the IP address of the printer: Select “Printer IP address.”
  See P.32

NOTE

- **If you select “Network port” or “Local port”, make sure that the printer driver has been installed.**
- **If you select “Printer IP address”, the firmware can be updated even if a printer driver is not already installed.**

(2) For a network connection

1. When “Network port” is selected, a list of printer drivers for the network port appears.
2. Select the printer driver, and then click the [Next].

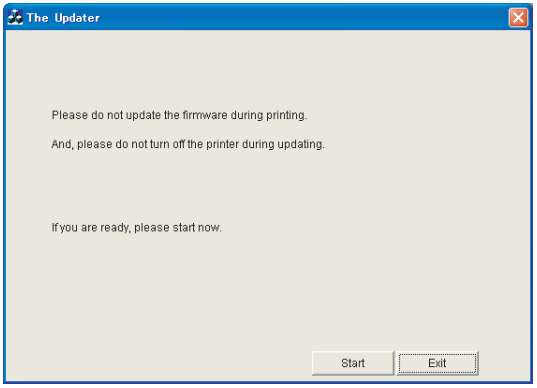


A011F2E558DA

3. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

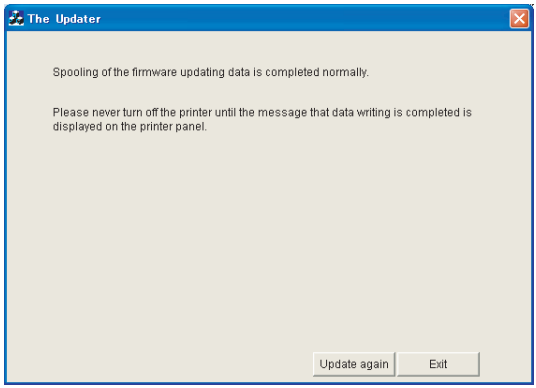
NOTE

- **Do not turn off the printer while its firmware is being updated.**


The Updater
Please do not update the firmware during printing.
And, please do not turn off the printer during updating.
If you are ready, please start now.
Start
Exit

A011F2E559DA

4. The result of the firmware transfer is displayed. Click the [Exit].


The Updater
Spooling of the firmware updating data is completed normally.
Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.
Update again
Exit

A011F2E560DA

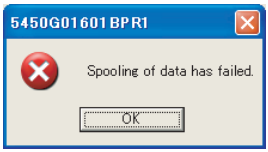
5. If the firmware was successfully updated, the printer will automatically restart.

<If spooling of the data fails>

NOTE

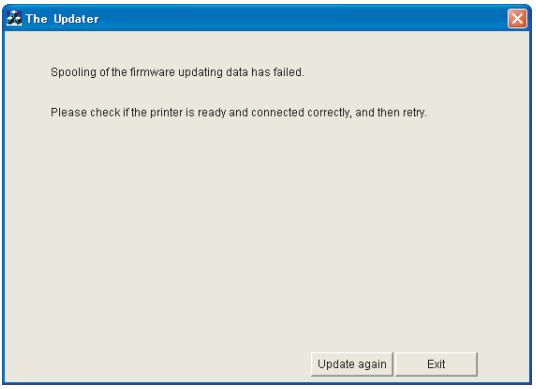
- **If spooling fails, data may remain in the printer spooler. Delete this data, and then try again.**

1. If spooling of the data fails, the following message appears.
2. Click [OK].



A011F2E561DA

3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].

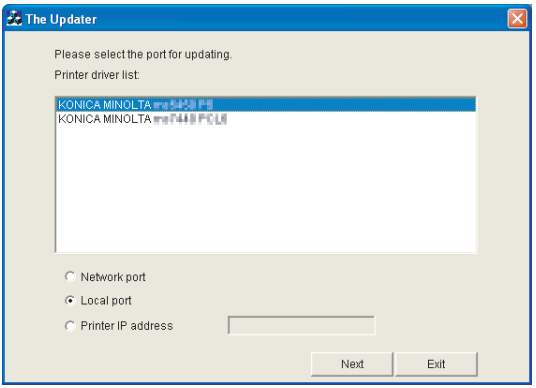

The Updater
Spooling of the firmware updating data has failed.
Please check if the printer is ready and connected correctly, and then retry.
Update again
Exit

A011F2E562DA

(3) For a local connection

1. When “Local port” is selected, a list of printer drivers for the local port appears.

2. Select the printer driver, and then click the [Next].

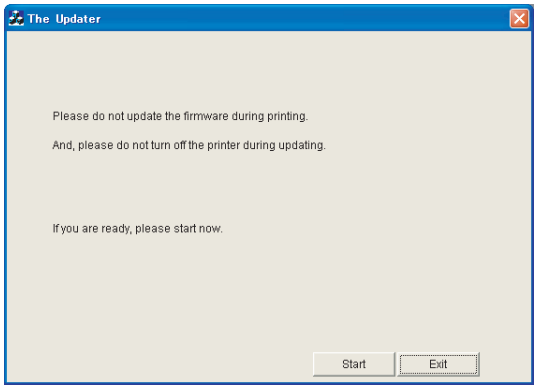


A011F2E563DA

3. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

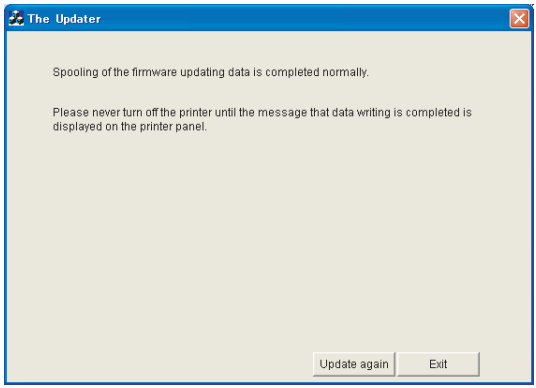
NOTE

- **Do not turn off the printer while its firmware is being updated.**


The Updater
Please do not update the firmware during printing.
And, please do not turn off the printer during updating.
If you are ready, please start now.
Start
Exit

A011F2E564DA

4. The result of the firmware transfer is displayed. Click the [Exit].


The Updater
Spooling of the firmware updating data is completed normally.
Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.
Update again
Exit

A011F2E565DA

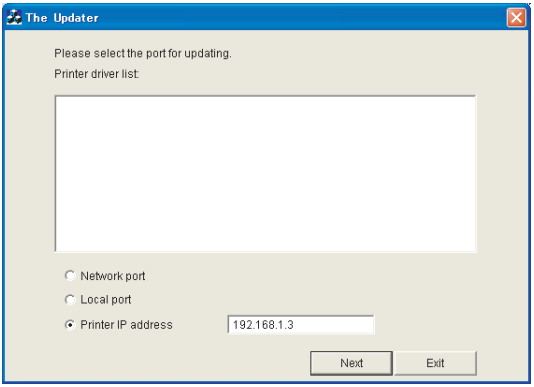
5. If the firmware was successfully updated, the printer will automatically restart.

<If spooling of the data fails>

For details, see “For a network connection.”
See P.29

(4) When specifying the IP address of the printer

1. When “Printer IP address” is selected, the “Printer IP address” box becomes available.
2. Type in the IP address, and then click the [Next].

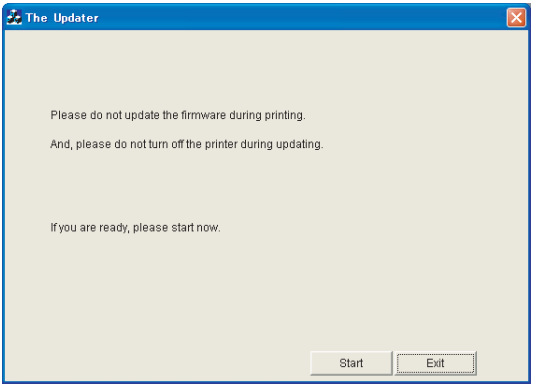


A011F2E566DA

3. A message appears, requesting confimation to update the firmware. Click the [Start] to begin transferring the firmware.

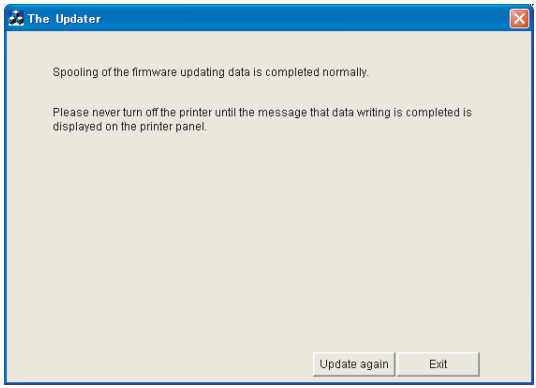
NOTE

- **Do not turn off the printer while its firmware is being updated.**


The Updater
Please do not update the firmware during printing.
And, please do not turn off the printer during updating.
If you are ready, please start now.
Start
Exit

A011F2E567DA

4. The result of the firmware transfer is displayed. Click the [Exit].

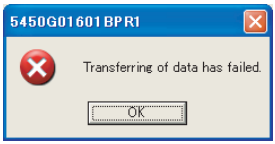

The Updater
Spooling of the firmware updating data is completed normally.
Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.
Update again
Exit

A011F2E560DA

5. If the firmware was successfully updated, the printer will automatically restart.

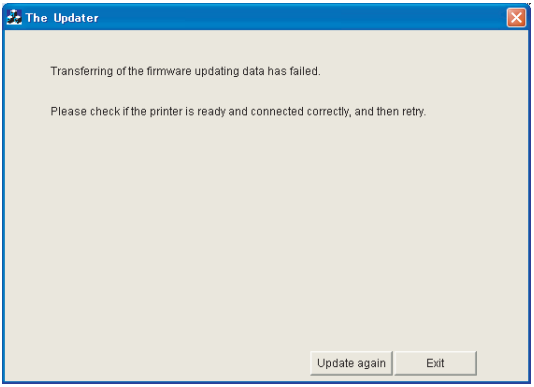
<If transferring of the data fails>

1. If transferring of the data fails, the following message appears.
2. Click [OK].



A011F2E569DA

3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].


The Updater
Transferring of the firmware updating data has failed.
Please check if the printer is ready and connected correctly, and then retry.
Update again
Exit

A011F2E570DA

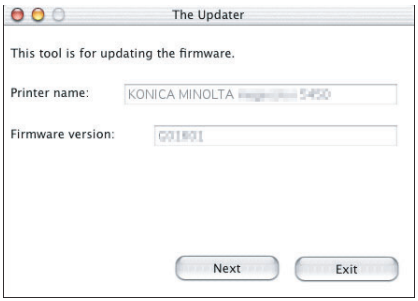
C. Connection for Macintosh

(1) Starting the firmware updater and the updating procedure

NOTE

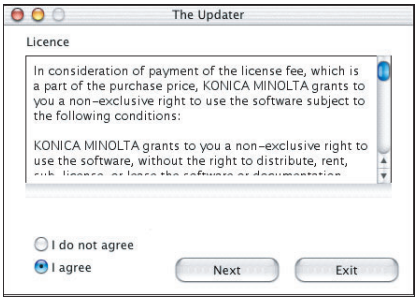
- **Before starting the firmware updater, turn on the printer, and make sure that it is correctly connected.**

1. Download the firmware updater.
2. Double-click "***"
3. The printer name and firmware version are displayed. Click the [Next].



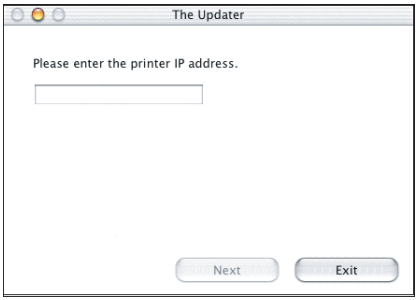
A0DXF2E541DA

4. The license agreement is displayed. Select “I agree”, and then click the [Next].


The Updater
Licence
In consideration of payment of the license fee, which is a part of the purchase price, KONICA MINOLTA grants to you a non-exclusive right to use the software subject to the following conditions:
KONICA MINOLTA grants to you a non-exclusive right to use the software, without the right to distribute, rent,
I do not agree
I agree
Next
Exit

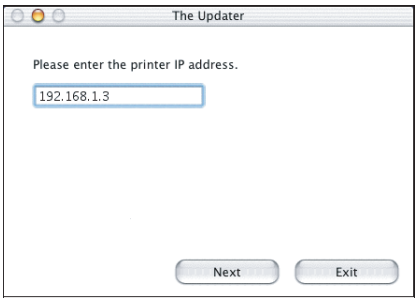
A011F2E572DA

5. The screen for specifying the IP address of the printer appears.



A011F2E573DA

6. Type in the IP address, and then click the [Next].

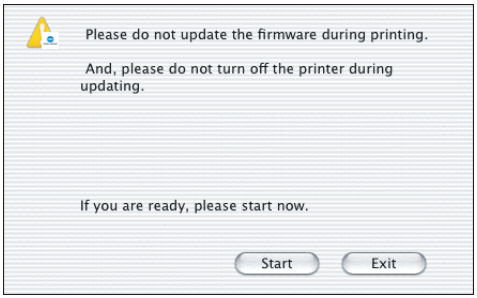


A011F2E574DA

7. A message appears, requesting confirmation to update the firmware. Click the [Start] to begin transferring the firmware.

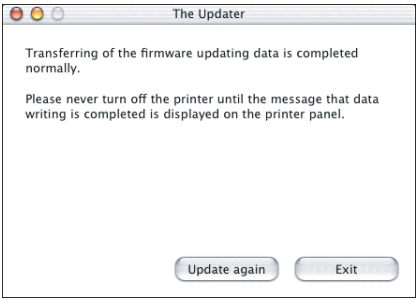
NOTE

- **Do not turn off the printer while its firmware is being updated.**


Please do not update the firmware during printing.
And, please do not turn off the printer during updating.
If you are ready, please start now.
Start
Exit

A011F2E575DA

8. The result of the firmware transfer is displayed. Click the [Exit].


The Updater
Transferring of the firmware updating data is completed normally.
Please never turn off the printer until the message that data writing is completed is displayed on the printer panel.
Update again
Exit

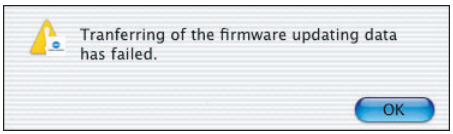
A011F2E576DA

9. If the firmware was successfully updated, the printer will automatically restart.

<If transferring of the data fails>

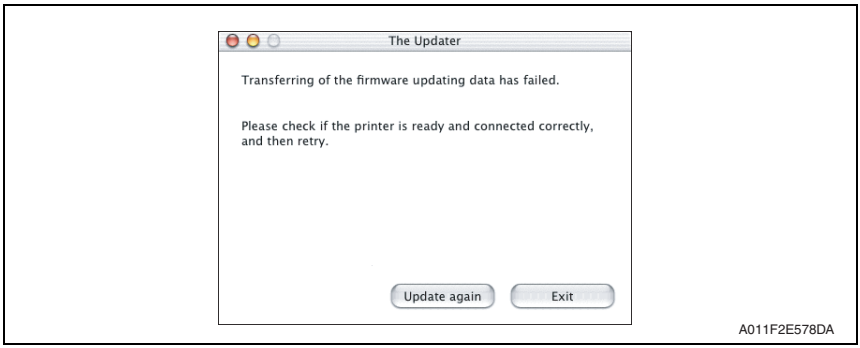
1. If transferring of the data fails, the following message appears.

2. Click [OK].



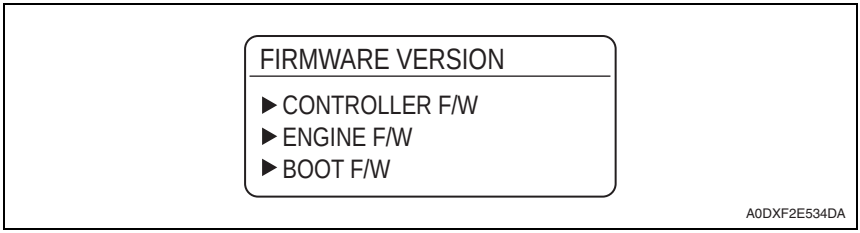
A011F2E577DA

3. Check that the printer is ready and that it is correctly connected, and then click the [Update again].


The Updater
Transferring of the firmware updating data has failed.
Please check if the printer is ready and connected correctly, and then retry.
Update again
Exit
A011F2E578DA

5.4 Checking the version after the firmware update

1. Display [SERVICE MENU].
2. Display [FIRMWARE VERSION].



3. Select the firmware that has been updated and check the current version.

6. Other

6.1 Disassembly/adjustment-prohibited items

A. Screws to which blue paint or green paint is applied

- **Blue paint or green paint is applied to some screws to prevent them from coming loose.**
- **As a general rule, screws to which blue paint or green paint is applied should not be removed or loosened.**

B. Red-painted screws

- **Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.**

C. Variable resistors on board

NOTE

- **Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.**

D. Removal of PWBs

⚠ CAUTION

- **When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal procedures.**
- **The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.**
- **Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.**

6.2 Disassembly/assembly/cleaning list (other parts)

6.2.1 Disassembly/assembly parts list

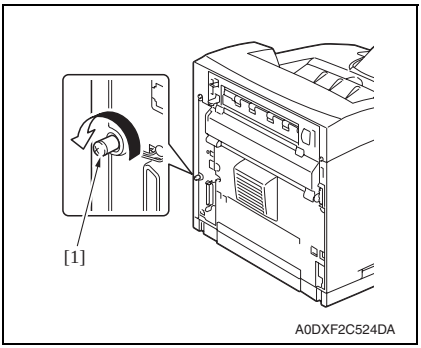
No.	Section	Part name	Ref.Page
1	Exterior part	Right cover	P.40
2		Rear top cover	P.41
3		Upper rear cover	P.41
4		Rear cover	P.42
5		Lower rear cover	P.42
6		Left cover	P.43
7		Media exit section cover	P.44
8		Front top cover	P.44
9		Front cover	P.47
10	Unit, assembly, etc	Control panel assy	P.47
11		Media exit assy	P.48
12		Tray 1 feed unit	P.49
13		Tray 2 feed unit	P.50
14		PH unit	P.51
15		Gear assy	P.53
16		Hard disk kit (option)	P.54
17		CF adapter (option)	P.55
18		DIMM (option)	P.56
19		Backup battery	P.56
20	Board	MFP board (MFPB)	P.57
21		Print control board (PRCB)	P.59
22		DC power supply (DCPU)	P.61
23	Motor	Main motor (M1)	P.62
24		Fusing cooling fan motor (FM1)	P.64
25		Cooling fan motor (FM2)	P.65
26	Clutch	Registration roller clutch (CL3)	P.66
27		Tray1 media feed clutch (CL1)	P.66
28		Tray 2 media feed clutch (CL2)	P.67

6.2.2 Cleaning parts list

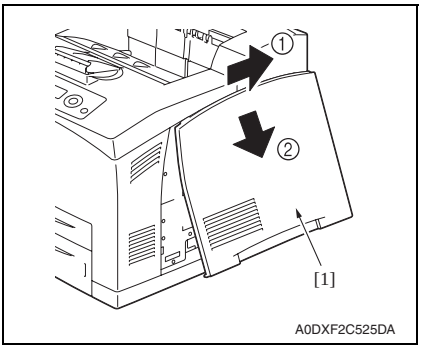
No.	Section	Part name	Ref.Page
1	Tray 1	Feed roller	P.68
2		Pick-up roller	P.68
3		Separation roller	P.68
4	Tray 2	Feed roller	P.69
5		Pick-up roller	P.69
6		Separation roller	P.69
7	Processing section	Laser lens	P.70

6.3 Disassembly/assembly procedure

6.3.1 Right cover

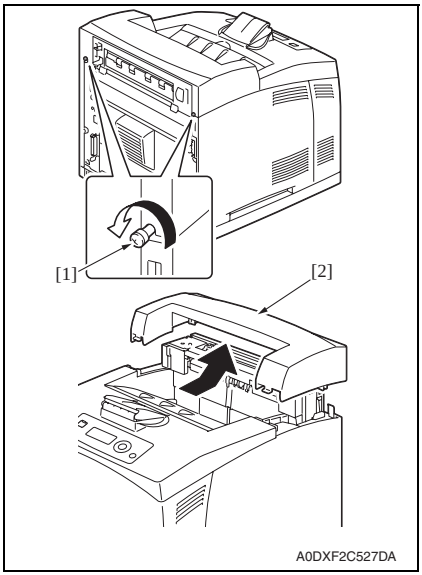


1. Loosen the screw [1].



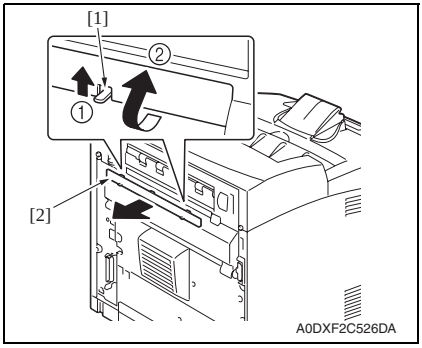
2. Remove the right cover [1].

6.3.2 Rear top cover



1. Loosen two screws [1], and remove the rear top cover [2].

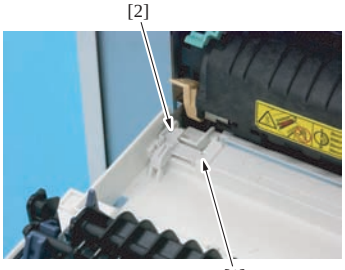
6.3.3 Upper rear cover



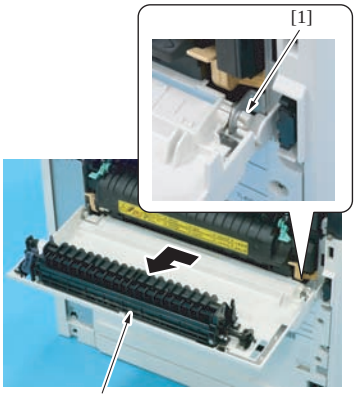
1. Unhook two tabs [1], and remove the upper rear cover [2].

6.3.4 Rear cover

1. Open the rear cover.



2. Unhook the tab [1], and remove the stopper [2].

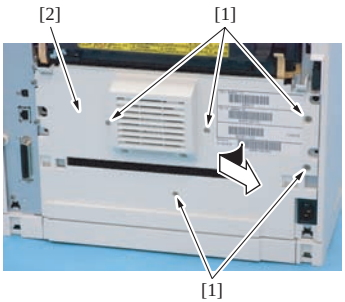


3. Unhook the tab [1], and remove the rear cover [2].

6.3.5 Lower rear cover

A. pagepro 5650EN

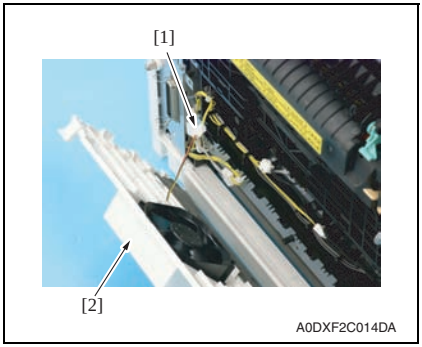
1. Remove the rear cover.
See P.42



2. Remove five screws [1], and take out the lower rear cover [2].

NOTE

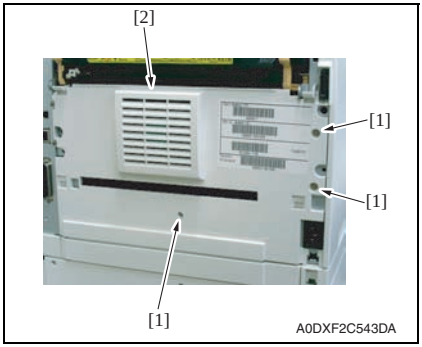
- **Do not remove it in rush as it is connected to the connector.**



3. Disconnect the connector [1], and remove the lower rear cover [2].

B. pagepro 4650EN

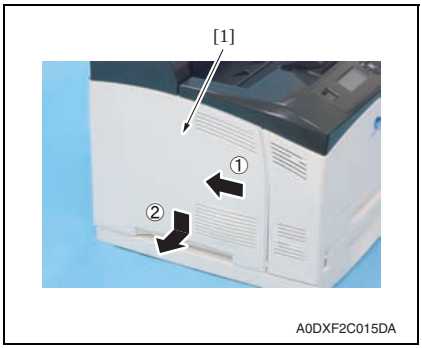
1. Remove the rear cover.
See P.42



2. Remove three screws [1], and remove the lower rear cover [2].

6.3.6 Left cover

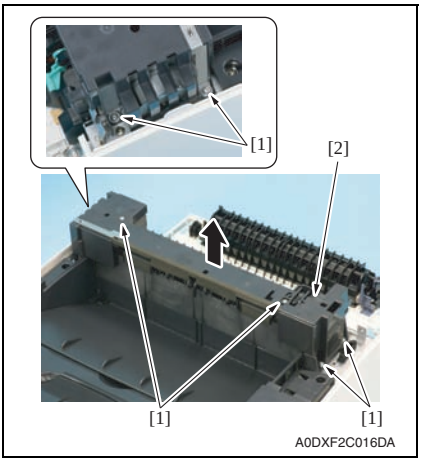
1. Remove the lower rear cover.
See P.42



2. Remove the left cover [1].

6.3.7 Media exit section cover

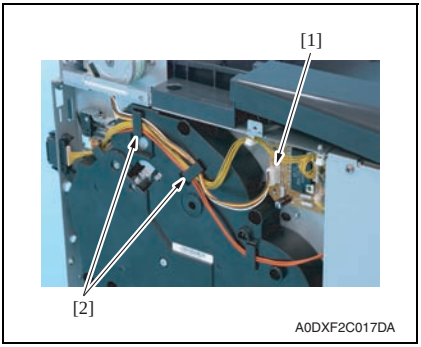
1. Open the rear cover.
2. Remove the rear top cover.
See P.41



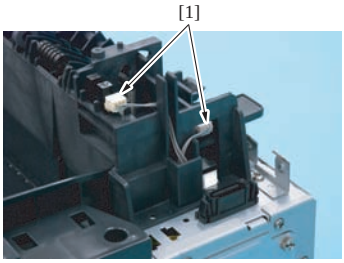
3. Remove six screws [1], and remove the media exit section cover [2].

6.3.8 Front top cover

1. Remove the right cover.
See P.40
2. Remove the media exit section cover.
See P.44
3. Remove the left cover.
See P.43

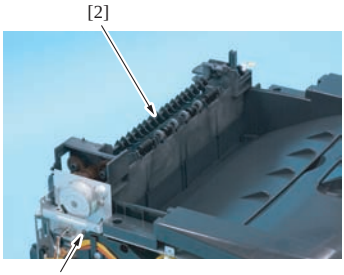


4. Disconnect the connector [1], and remove the harnesses from two harness guides [2].



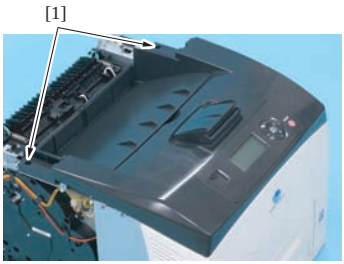
A0DXF2C018DA

5. Disconnect two connectors [1].



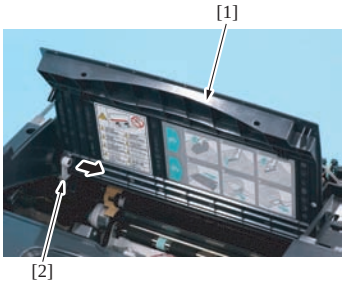
A0DXF2C019DA

6. Remove the screw [1], and remove the media exit assy [2].

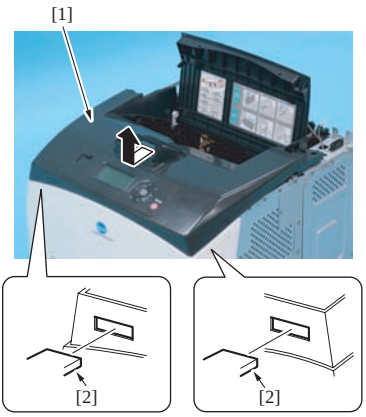


A0DXF2C020DA

7. Remove two screws [1].



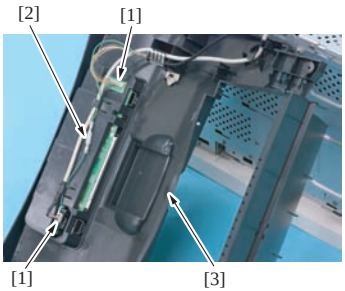
8. Open the top cover [1], and take out the stopper [2] from the hinge.



9. Following the procedure illustrated on the left, unhook two tabs [2] of the front top cover [1].

NOTE

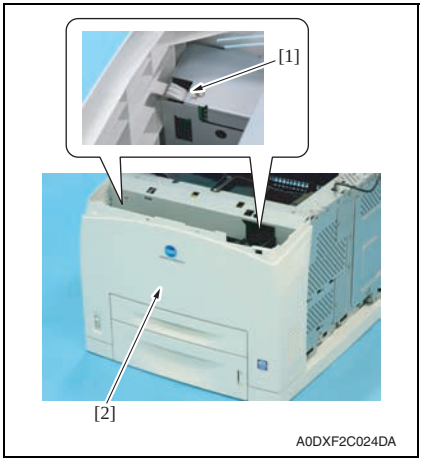
- **Do not remove it in rush as it is connected to the connector.**



10. Remove two connectors [1] and the bullet terminal [2]. Then, remove the front top cover assy [3].

6.3.9 Front cover

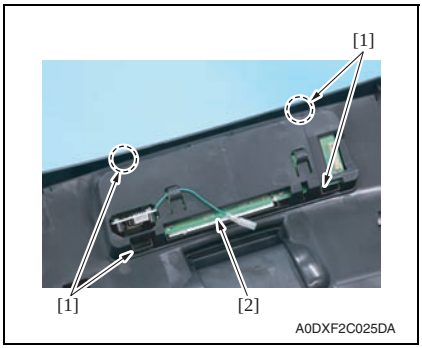
1. Remove the front top cover.
See P.44



2. Unhook two tabs [1], and remove the front cover [2].

6.3.10 Control panel assy

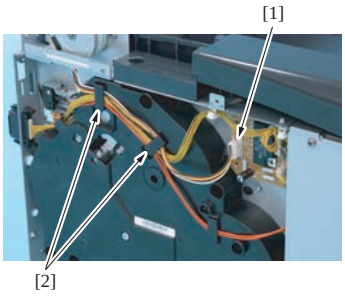
1. Remove the front top cover.
See P.44



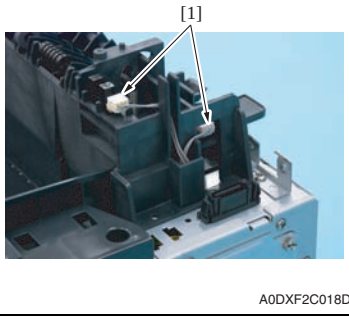
2. Unhook four tabs [1], and remove the control panel assy [2].

6.3.11 Media exit assy

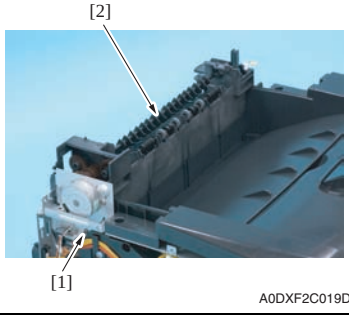
1. Remove the media exit section cover.
See P.44
2. Remove the left cover.
See P.43



3. Disconnect the connector [1], and remove the harnesses from two harness guides [2].



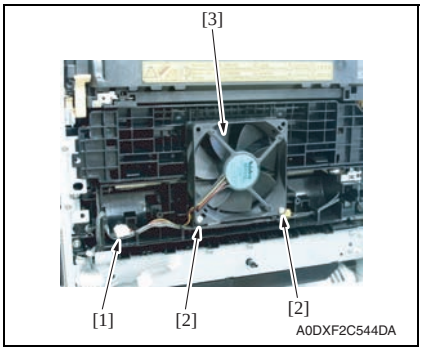
4. Disconnect two connectors [1].



5. Remove the screw [1], and remove the media exit assy [2].

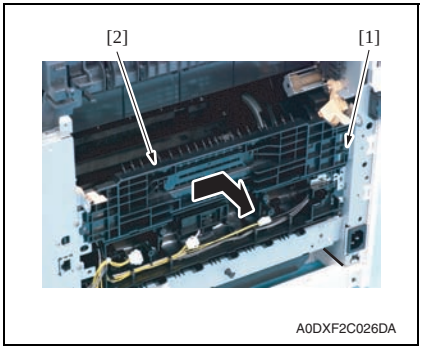
6.3.12 Tray 1 feed unit

1. Remove the toner cartridge.
See P.9
2. Remove the transfer roller.
See P.19
3. Remove the fuser unit.
See P.20
4. Remove the rear cover.
See P.42
5. Remove the lower rear cover.
See P.42

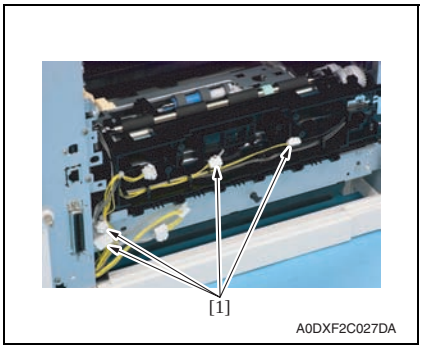


- This procedure is only for pagepro 4650 EN

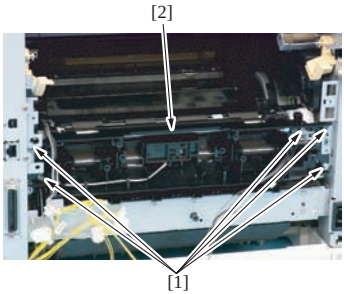
6. Disconnect the connector [1].
7. Remove two screws [2], and remove the fusing cooling fan motor [3].



8. Unhook the tab [1], and remove the transfer roller housing [2].



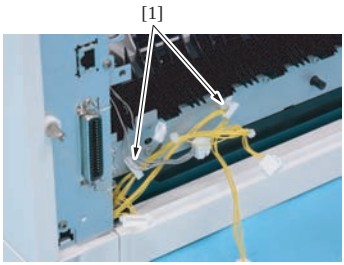
9. Disconnect four connectors [1], and remove the harnesses from the harness guide.



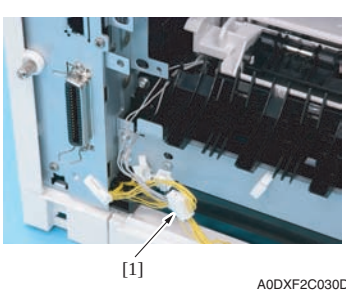
10. Remove five screws [1], and remove the tray 1 feed unit [2].

6.3.13 Tray 2 feed unit

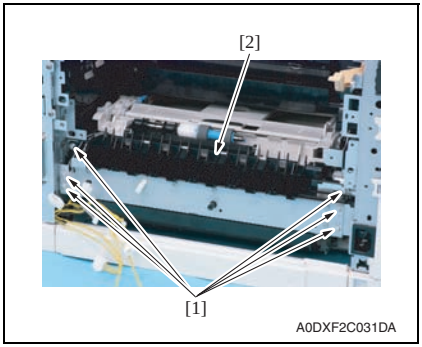
1. Remove the tray 1 feed unit.
See P.49



2. Remove the harnesses from two wire saddles [1].



3. Disconnect the connector [1], and remove the harness from the harness guide.



4. Remove six screws [1], and remove the tray 2 feed unit [2].

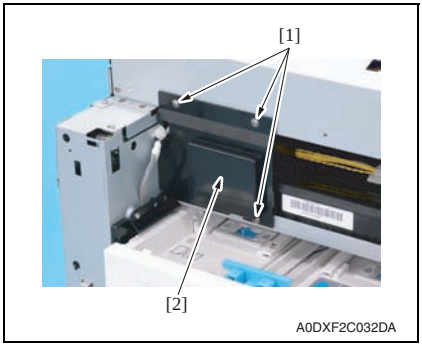
6.3.14 PH unit

CAUTION
• **Do not replace the printer head unit while the power is ON. Laser beam generated during the above mentioned activity may cause blindness.**
• **Do not disassemble or adjust the printer head unit. Laser beam generated during the above mentioned activity may cause blindness.**

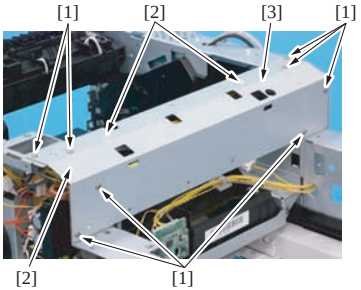
NOTE

- **Be sure to perform the removal and reinstallation procedures for the PH unit on a level and flat surface. Performing the procedures on a slant desk or similar place could result in the PH unit being misaligned.**

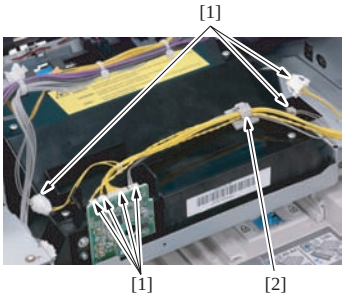
1. Remove the front cover.
See P.47
2. Remove the cooling fan motor assy.
See P.65



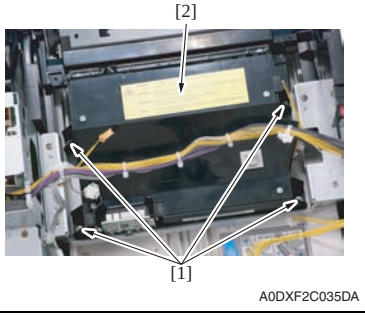
3. Remove three screws [1], and remove the cover [2].



4. Remove the eight screws [1].
5. Remove three wire saddles [2], and remove the reinforcement plate [3].



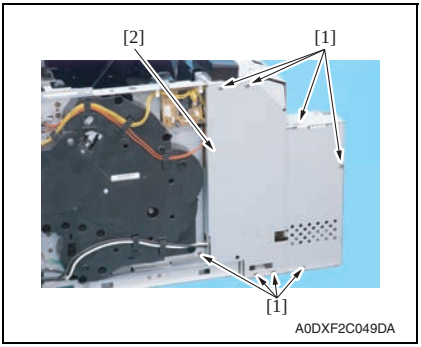
6. Disconnect seven connectors [1], and remove the harnesses from the wire saddle [2].



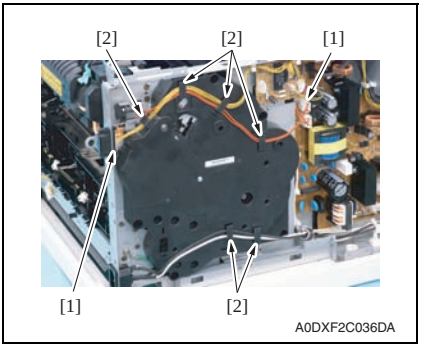
7. Remove four screws [1], and remove the PH unit [2].

6.3.15 Gear assy

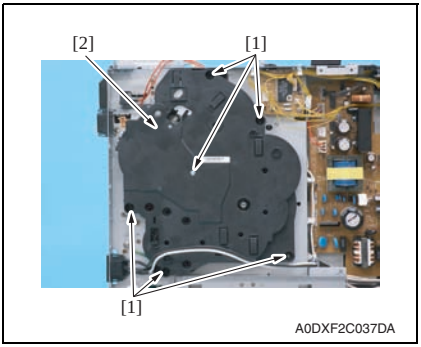
1. Remove the front cover.
See P.47



2. Remove eight screws [1], and remove the DC power supply protective shield [2].



3. Disconnect two connectors [1], and remove the harnesses from the harness guides [2].



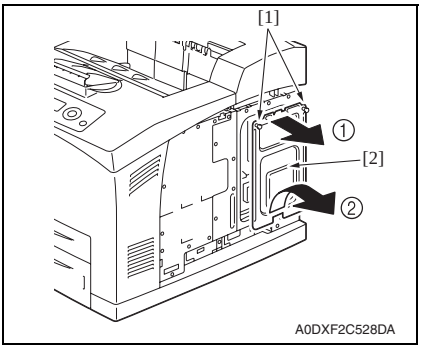
4. Remove six screws [1], and remove the gear assy [2].

NOTE

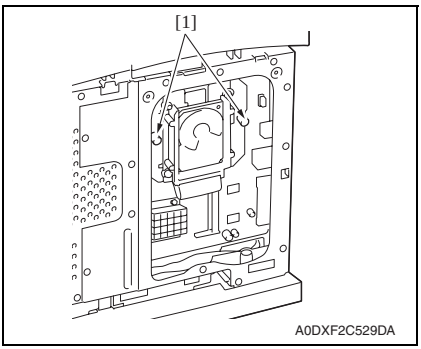
- **The gear assy includes gears that are not secured in position. Use care to prevent these gears from dropping during the removal procedure.**

6.3.16 Hard disk kit (option)

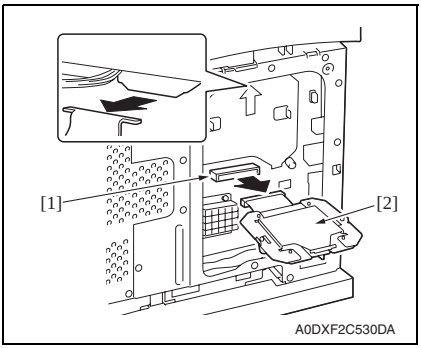
1. Remove the right cover.
See P.40



2. Loosen two screws [1], and remove the panel [2].



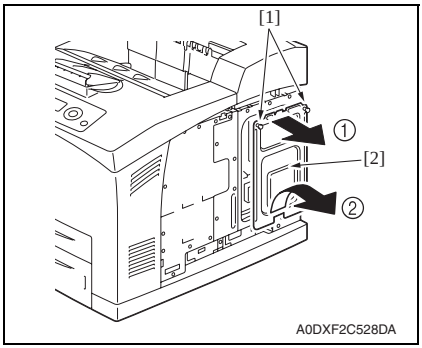
3. Loosen two screws [1].



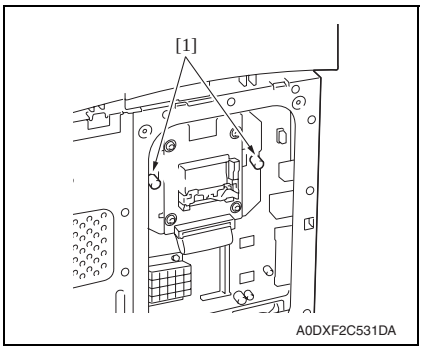
4. Disconnect the connector [1], and remove the hard disk kit [2].

6.3.17 CF adapter (option)

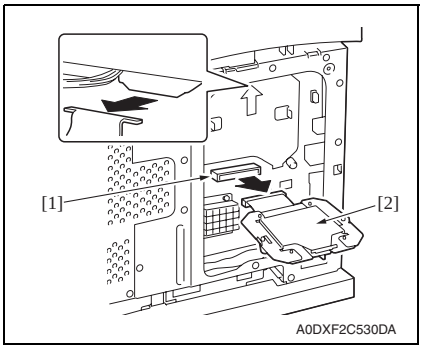
1. Remove the right cover.
See P.40



2. Loosen two screws [1], and remove the panel [2].



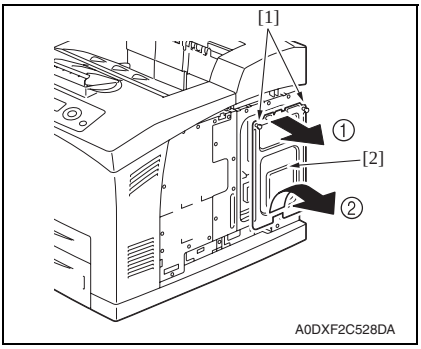
3. Loosen two screws [1].



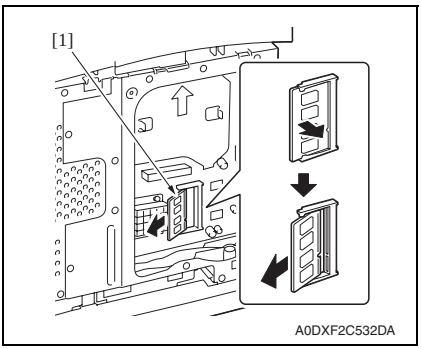
4. Disconnect the connector [1], and remove the CF adapter [2].

6.3.18 DIMM (option)

1. Remove the right cover.
See P.40



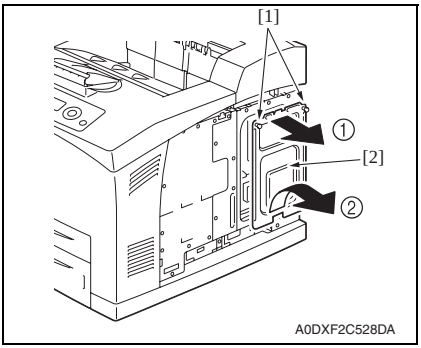
2. Loosen two screws [1], and remove the panel [2].



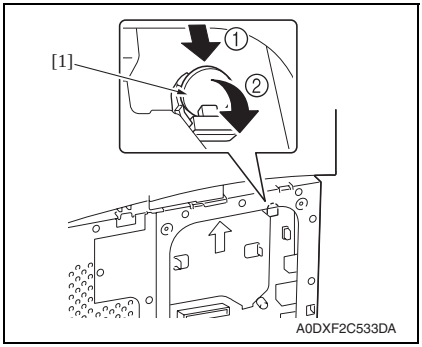
3. Remove the DIMM [1].

6.3.19 Backup battery

1. Remove the right cover.
See P.40



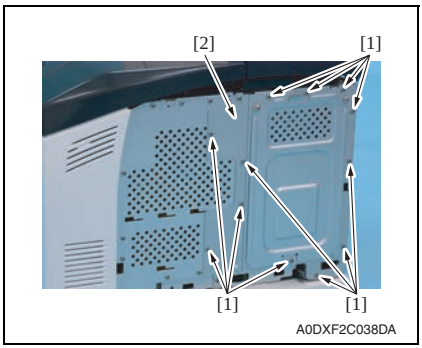
2. Loosen two screws [1], and remove the panel [2].



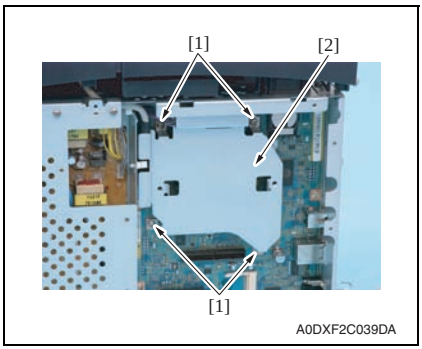
3. Remove the backup battery [1].

6.3.20 MFP board (MFPB)

1. Remove the right cover.
See P.40



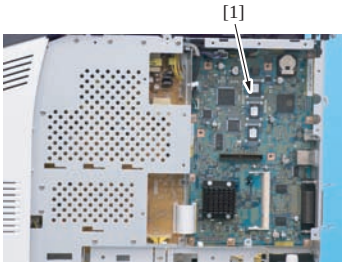
2. Remove twelve screws [1], and remove the MFP board protective shield [2].



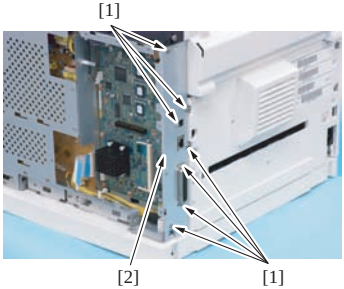
3. Remove four screws [1], and remove the fixing plate [2].

NOTE

- **Remove the optional DIMM, hard disk kit, or CF adapter, if mounted on the machine, before removing the fixing plate.**

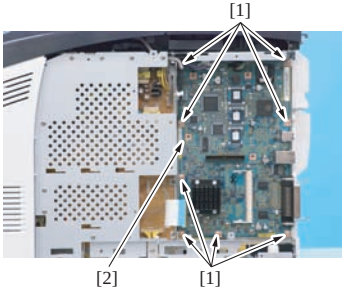


4. Disconnect all connectors and flat cables from the MFP board [1].



5. Remove seven screws [1], and remove the interface cover [2].

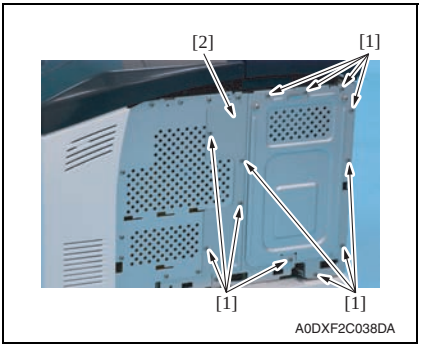
6. Remove the backup battery.
See P.56



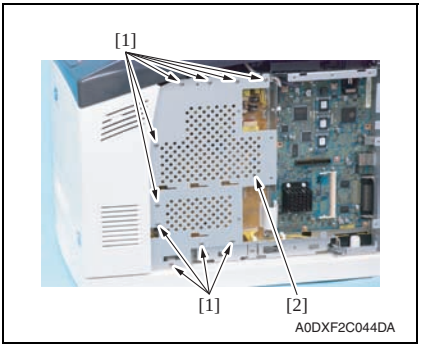
7. Remove eight screws [1], and remove the MFP board [2].

6.3.21 Print control board (PRCB)

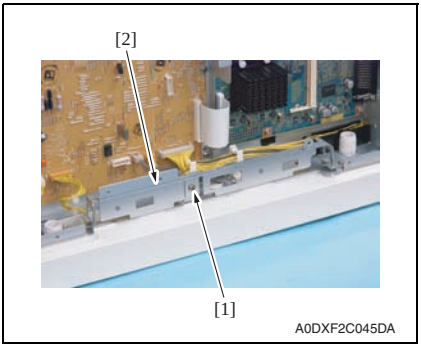
1. Remove the right cover.
See P.40



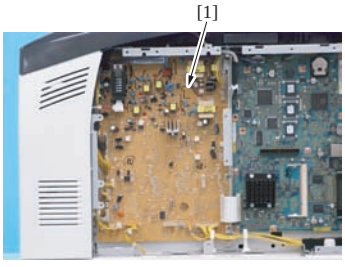
2. Remove twelve screws [1], and remove the MFP board protective shield [2].



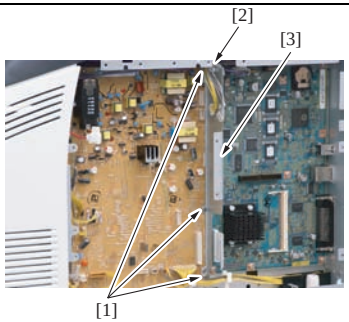
3. Remove ten screws [1], and remove the print control board protective shield [2].



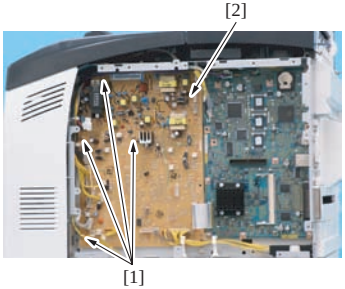
4. Remove the screw [1], and remove the metal plate [2].



5. Disconnect all connectors and flat cables from the print control board [1].



6. Remove three screws [1].
7. Remove the harness from the wire saddle [2], and remove the metal plate [3].



8. Remove four screws [1], and remove the print control board [2].

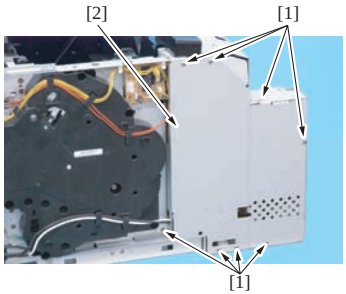
9. Re-mount the DIMM from the old print control board.
10. Re-mount the backup battery from the old print control board.

NOTE

- **When the print control board is replaced, upgrade the firmware to the latest version.**
  See P.23

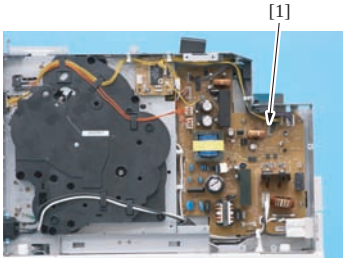
6.3.22 DC power supply (DCPU)

1. Remove the front cover.
See P.47



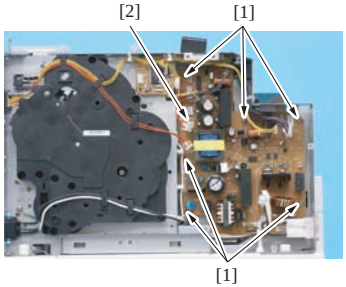
A0DXF2C049DA

2. Remove eight screws [1], and remove the DC power supply protective shield [2].



A0DXF2C050DA

3. Disconnect all connectors from the DC power supply [1].

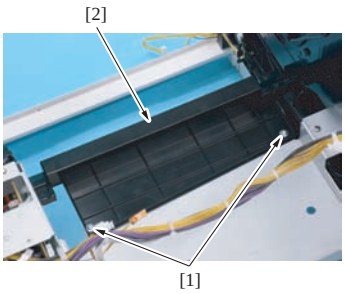


A0DXF2C051DA

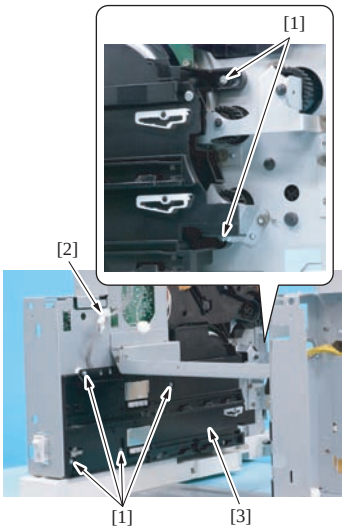
4. Remove six screws [1], remove and the DC power supply [2].

6.3.23 Main motor (M1)

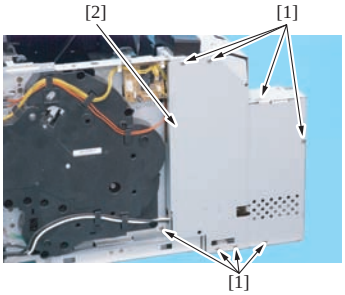
1. Remove the PH unit.
See P.51
2. Remove the fuser unit.
See P.20
3. Remove the transfer roller.
See P.19
4. Remove the tray 1 feed unit.
See P.49
5. Remove the tray 2 feed unit.
See P.50



6. Remove two screws [1], and remove the plate [2].

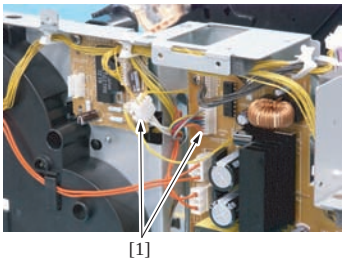


7. Remove six screws [1].
8. Disconnect the connector [2], and remove the left guide rail assy [3].



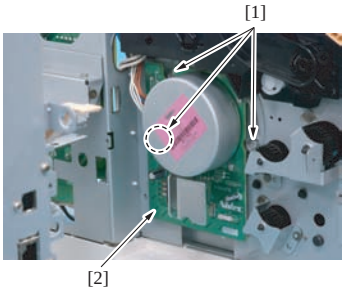
A0DXF2C049DA

9. Remove eight screws [1], and remove the DC power supply protective shield [2].



A0DXF2C054DA

10. Disconnect two connectors [1].



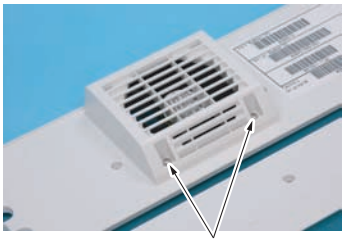
A0DXF2C055DA

11. Remove three screw [1], and remove the main motor [2].

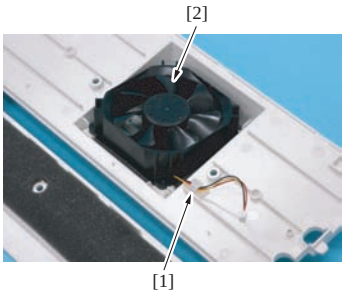
6.3.24 Fusing cooling fan motor (FM1)

A. pagepro 5650EN

1. Remove the lower rear cover.
See P.42



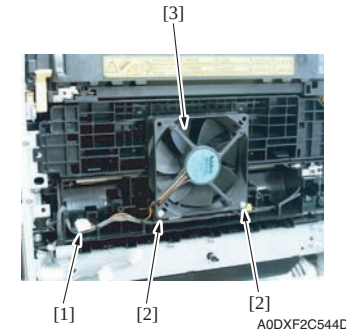
2. Remove two screws [1].



3. Remove the harness from the wire saddle [1], and remove the fusing cooling fan motor [2].

B. pagepro 4650EN

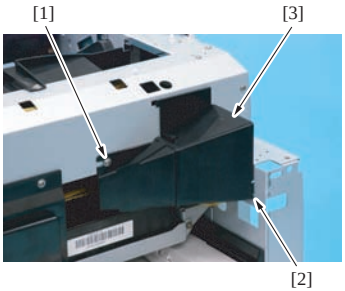
1. Remove the lower rear cover.
See P.42



2. Disconnect the connector [1].
3. Remove two screws [2], and remove the fusing cooling fan motor [3].

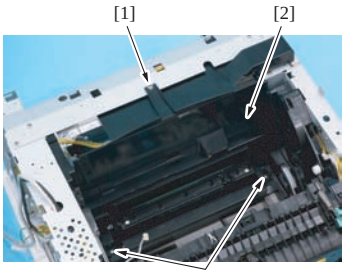
6.3.25 Cooling fan motor (FM2)

1. Remove the front cover.
See P.47



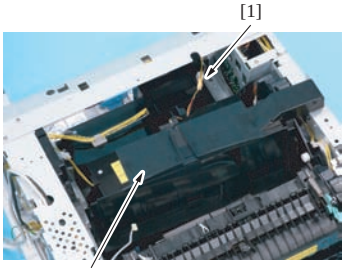
A0DXF2C058DA

2. Remove the screw [1].
3. Unhook the tab [2], and remove the air intake duct [3].



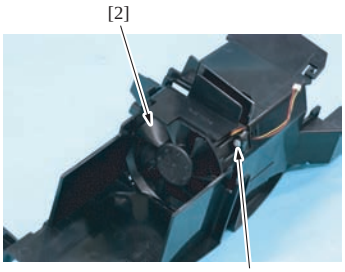
A0DXF2C059DA

4. Remove three screws [1] of the cooling fan motor assy [2].



A0DXF2C060DA

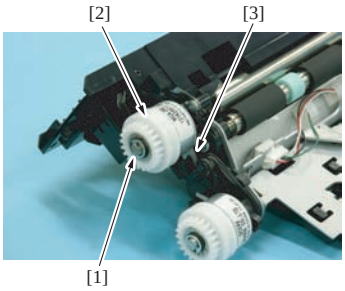
5. Disconnect the connector [1], and remove the cooling fan motor assy [2].



6. Remove the screw [1], and remove the cooling fan motor [2].

6.3.26 Registration roller clutch (CL3)

1. Remove the tray 1 feed unit.
See P.49



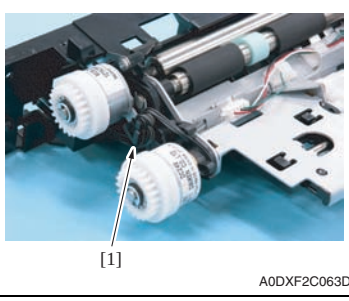
2. Remove the E-ring [1], and remove the registration roller clutch [2].

NOTE

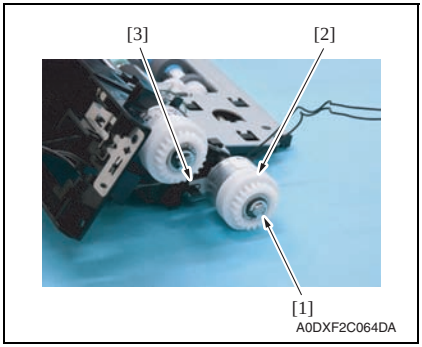
- **When reinstalling the clutch, make sure that the notch [3] on the clutch comes to the position shown in the left picture.**

6.3.27 Tray 1 media feed clutch (CL1)

1. Remove the tray 1 feed unit.
See P.49



2. Remove the harness from the harness guide [1].



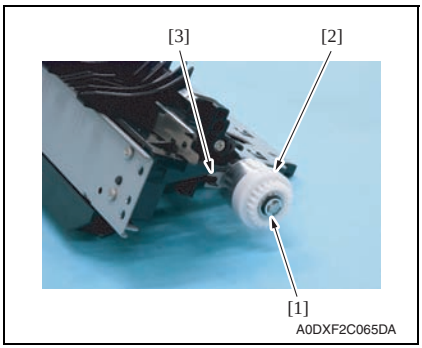
3. Remove the E-ring [1], and remove the tray 1 media feed clutch [2].

NOTE

- **When reinstalling the clutch, make sure that the notch [3] on the clutch comes to the position shown in the left picture.**

6.3.28 Tray 2 media feed clutch (CL2)

1. Remove the tray 2 feed unit.
See P.50



2. Remove the E-ring [1], and remove the tray 2 media feed clutch [2].

NOTE

- **When reinstalling the clutch, make sure that the notch [3] on the clutch comes to the position shown in the left picture.**

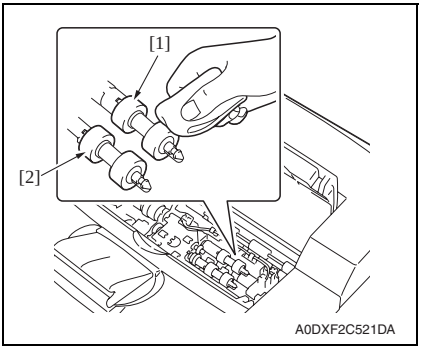
6.4 Cleaning procedure

NOTE

- **The alcohol described in the cleaning procedure represents the isopropyl alcohol.**

6.4.1 Tray 1 feed roller/pick-up roller

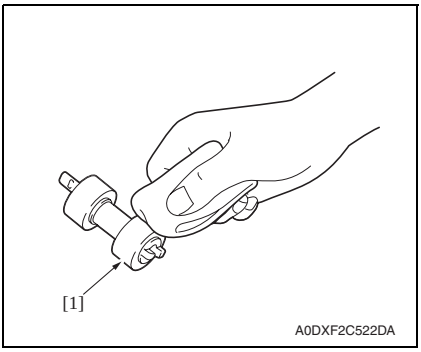
1. Remove the toner cartridge.
See P.9



2. Using a cleaning pad dampened with alcohol, wipe the feed rollers [1] and pick-up rollers [2] clean of dirt.

6.4.2 Tray 1 separation roller

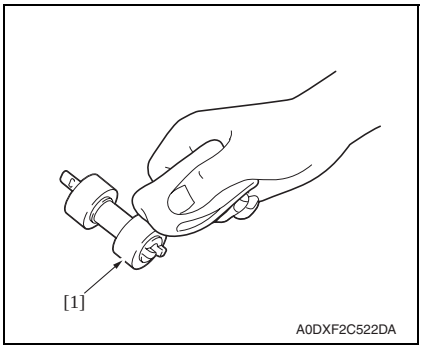
1. Remove the tray 1 separation roller assy.
See P.12



2. Using a cleaning pad dampened with alcohol, wipe the separation rollers [1] clean of dirt.

6.4.3 Tray 2 feed roller

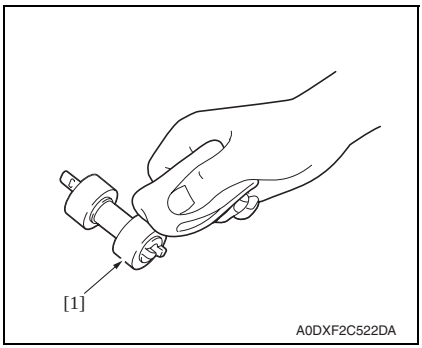
1. Remove the tray 2 feed roller assy.
See P.14



2. Using a cleaning pad dampened with alcohol, wipe the feed rollers [1] clean of dirt.

6.4.4 Tray 2 pick-up roller

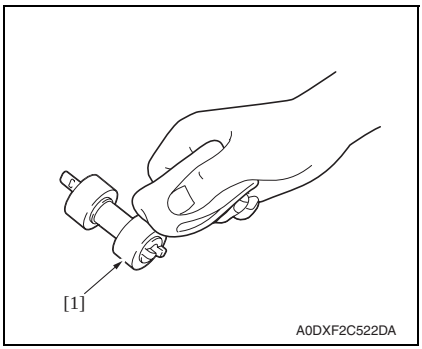
1. Remove the tray 2 pick-up roller assy.
See P.16



2. Using a cleaning pad dampened with alcohol, wipe the pick-up rollers [1] clean of dirt.

6.4.5 Tray 2 separation roller

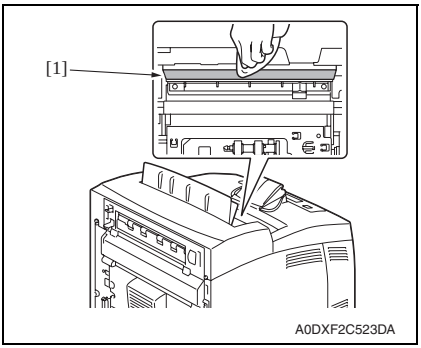
1. Remove the tray 2 separation roller assy.
See P.17



2. Using a cleaning pad dampened with alcohol, wipe the separation rollers [1] clean of dirt.

6.4.6 Laser lens

1. Remove the toner cartridge.
See P.9



2. Using a cleaning pad dampened with alcohol, wipe the laser lens [1] clean of dirt.

Adjustment/Setting

7. How to use the adjustment section

- "Adjustment/Setting" contains detailed information on the adjustment items and procedures for this machine.
- Throughout this "Adjustment/Setting," the default settings are indicated by " ".

A. Advance checks

- Before attempting to solve the customer problem, the following advance checks must be made. Check to see if:

1. The power supply voltage meets the specifications.
2. The power supply is properly grounded.
3. The machine shares the power supply with any other machine that draws large current intermittently (e.g., elevator and air conditioner that generate electric noise).
4. The installation site is environmentally appropriate: high temperature, high humidity, direct sunlight, ventilation, etc.; levelness of the installation site.
5. The original has a problem that may cause a defective image.
6. The density is properly selected.
7. Correct media is being used for printing.
8. The units, parts, and supplies used for printing (developer, PC drum, etc.) are properly replenished and replaced when they reach the end of their useful service life.
9. Toner is not running out.

B. Precautions for service jobs

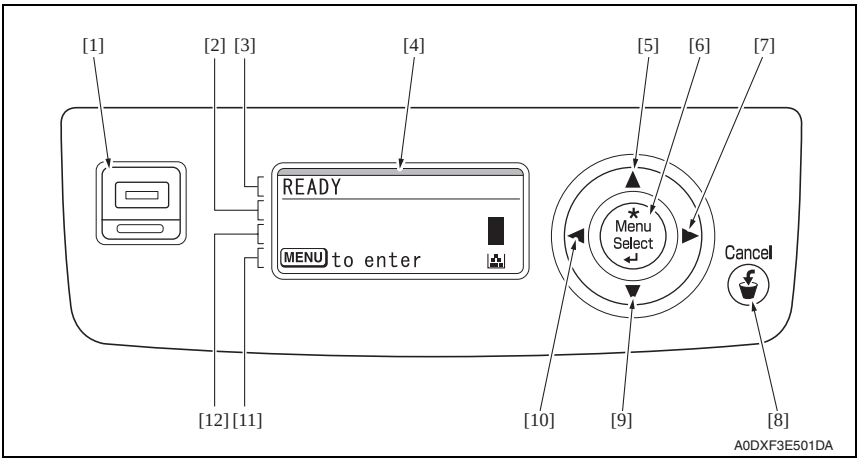
1. To unplug the power cord of the machine before starting the service job procedures.
2. Special care should be used when handling the fuser unit which can be extremely hot.
3. The developing unit has a strong magnetic field. Keep watches and measuring instruments away from it.
4. Take care not to damage the PC drum with a tool or similar device.
5. Do not touch IC pins with bare hands.

8. Description of the control panel

8.1 Control panel display

8.1.1 Parts of the control panel display

- The following shows the names of each part of the control panel. These names are used throughout this manual.
  From the top, the panel is divided into LCD 1, LCD 2, LCD 3, and LCD 4.
- LCD 4 may display a message instructing you to press a key on the control panel. When you press that key, the displayed message changes.



[1] Memory direct print port
[2] LCD 2
[3] LCD 1
[4] LED line (printer status indicator)
[5] Up key
[6] Menu/Select key
[7] Right key
[8] Cancel key
[9] Down key
[10] Left key
[11] LCD 4
[12] LCD 3

NOTE

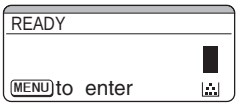
- **The display screen is not designed for touch panel operation; therefore, do not touch the icons on the screen. If it is pushed too hard, the LCD (liquid crystal display) may be damaged.**

8.1.2 Message structure

- There are five types of messages.

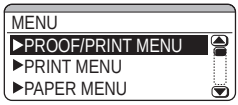
Message	Description
Normal messages	These messages are displayed after warmup has been completed: • Toner remaining gauge • Data-receiving message • Printing message • Firmware update messages • Warnings
Menu messages	These messages are displayed after the Menu/Select key is pressed.
Operator call messages	These messages are displayed when minor error(s) that can be handled by users occur.
Service call messages	These messages are displayed when error(s) that cannot be handled by users occur.
Help messages	These messages are displayed when the Down key ▽ is pressed when a normal message/warning or operator call message is displayed.

Normal message



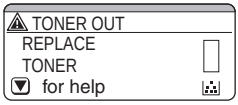
A0DXF3E504DA

Menu message



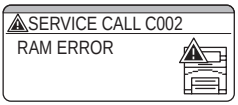
A0DXF3E505DA

Operator call message



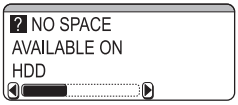
A0DXF3E506DA

Service call message



A0DXF3E507DA

Help message

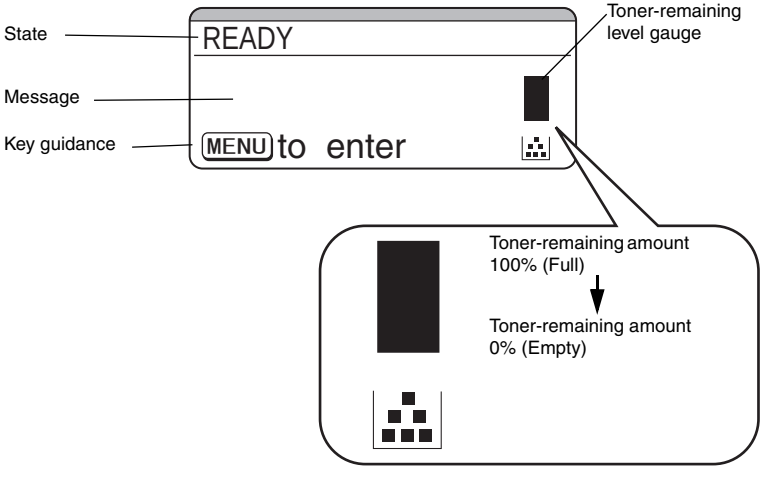


A0DXF3E508DA

8.1.3 Normal messages

- The basic screen is displayed after warm-up has been completed.
- The line-shaped LED on the display lights up steadily in a color corresponding to the specific message displayed on it.

Display	Description
LCD 1	Printer mode is displayed. (Normally, “READY” is displayed.)
LCD 2	The message is displayed. (Normally, no message is displayed.)
LCD 3	
LCD 4	Key guidance is displayed. • Normally “MENU to enter” is displayed. When the Menu/Select key is pressed, the panel displays the MENU screen. • When a WARNING message is displayed, “▽ for help” is also displayed. When the Down key ▽ is pressed, the panel displays the HELP screen.



A. Toner-remaining level gauge

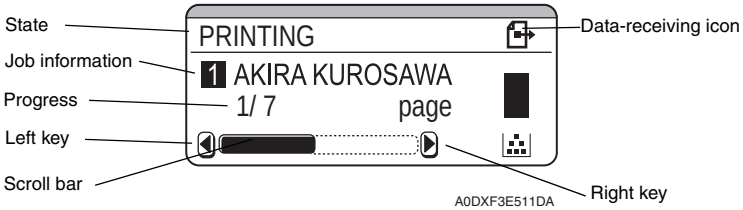
- The amount of toner remaining is graphed in 10% increments (11 scales.) However, it's not displayed during the following states:

  - Operator Call
  - Service Call
  - Menu
  - Help menu
  - BOOT message
  - When the toner remaining amount is not determined immediately after startup.
  - When using toner made by companies other than Konica Minolta

B. Data receiving message/print

- The control panel displays the following description at data receiving message/print.

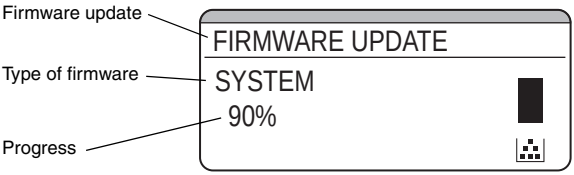
Display	Description
LCD 1	Printer mode is displayed (for example, PRINTING). • PROCESSING is displayed during data receiving or printer startup. • PRINTING is displayed during printing. • When printing in sets, [COPYING] is displayed after the second set starts printing. • The normal printing data-receiving icon "" is displayed on the right during data receiving. • The Memory-Direct connecting icon "" is displayed on the right when the USB memory device is connected to the machine. • The Memory-Direct printing data-receiving icon "" is displayed on the right during data receiving.
LCD 2	Job information is displayed (for example, 1 AKIRA KUROSAWA). • The job owner name, etc. set with PJL commands is displayed. • When multiple jobs are set, the number is displayed to the left of the owner name.
LCD 3	Job progress is displayed (for example, 1/7 page). • In normal print mode, "Number of processed print / Total number of print" is displayed. • When printing in sets, "Number of processed print/Total number of a set print" is displayed while the first set is copying. After the second set starts printing, the LCD 1 state is changed to COPYING and "Number of processed print /Total number of print" is displayed.
LCD 4	Scroll bar is displayed. • When multiple jobs are sent, a scroll bar is displayed. • By pressing the left key◁/right key▷, the jobs waiting to be printed are displayed. The following example shows the scroll bar in the case of two jobs. By pressing the right key, the panel displays the job waiting to be printed. To return to the display of the job currently processing, press the left key.



C. Firmware update

- The control panel displays the following description at firmware update.

Display	Description
LCD 1	FIRMWARE UPDATE is displayed.
LCD 2	LCD 2 displays the type of firmware (for example, SYSTEM). • SYSTEM: Controller firmware • BOOT: Boot firmware • RESOURCE: Resource file • CONFIGURATION: Equipment configuration file
LCD 3	Progress of the update is displayed (for example, 90%).
LCD 4	No display

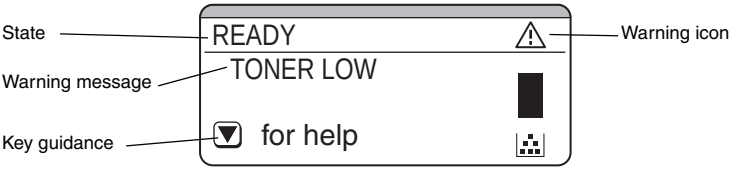


A0DXF3E513DA

D. Warning

- This message is displayed when the print is available but some user manipulation(s) are required. The control panel displays the following description for warning.

Display	Description
LCD 1	Print mode is displayed and warning icon is displayed on the right (for example, READY).
LCD 2	Warning message is displayed (for example, TONER LOW).
LCD 3	
LCD 4	Key guidance is displayed. (for example, ▽ for help: By pressing the down key ▽, the screen displays the help screen)



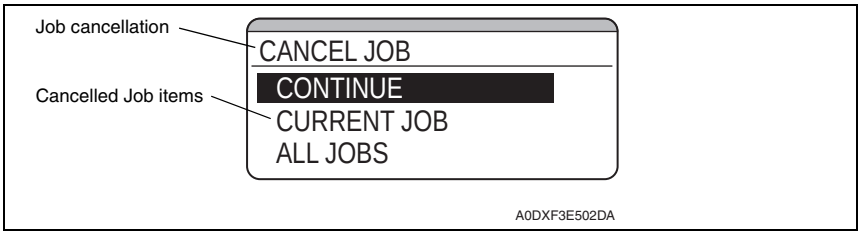
A0DXF3E514DA

E. Job cancellation

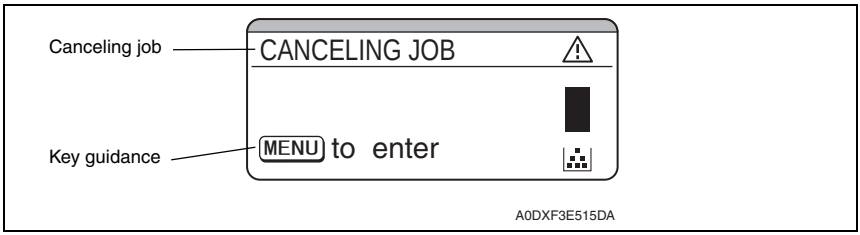
- By pressing the Cancel key after the job is sent, the control panel displays the job cancel menu.
- When no job is has been sent, pressing the Cancel key has no effect.
- The control panel displays the following description at the job cancel menu.

Display	Description
LCD 1	CANCEL JOB is displayed.
LCD 2	CONTINUE is displayed. • Function: Continue the print of currently processing job.
LCD 3	CURRENT JOB is displayed. • Function: Stop the print of currently processing job.
LCD 4	ALL JOBS is displayed • Stop the printing of all jobs, including the job currently being processed and all jobs waiting to be printed.

- By pressing the up key△/down key▽, the item can be selected.
- The selected item is displayed with highlighted text. The default setting is CONTINUE.
- By pressing the Menu/Select key, the selected item is entered.
- By pressing the Cancel key, the job cancel menu is closed.



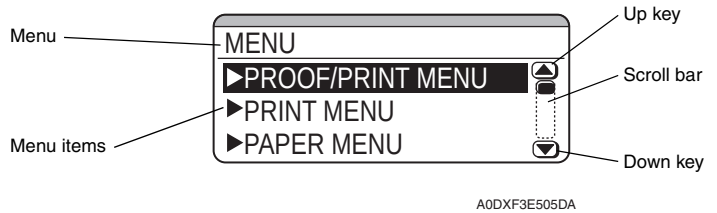
- By selecting CURRENT JOB or ALL JOB and pressing the Menu/Select key, job cancellation is implemented.



F. Menu

- The menu is displayed when the Menu/Select key is pressed.
- The control panel displays the following description at the menu screen.

Display	Description
LCD 1	The menu of a upper stratum is displayed.
LCD 2 LCD 3 LCD 4	Menu items are displayed (3 items/ 9 items). • By pressing the up key△/down key▽, the item is selected. • The menu consists of the following 9 items: - PROOF/ PRINT MENU - PRINT MENU - PAPER MENU - QUALITY MENU - MEMORY DIRECT - INTERFACE MENU - SYS DEFAULT MENU - MAINTENANCE MENU - SERVICE MENU



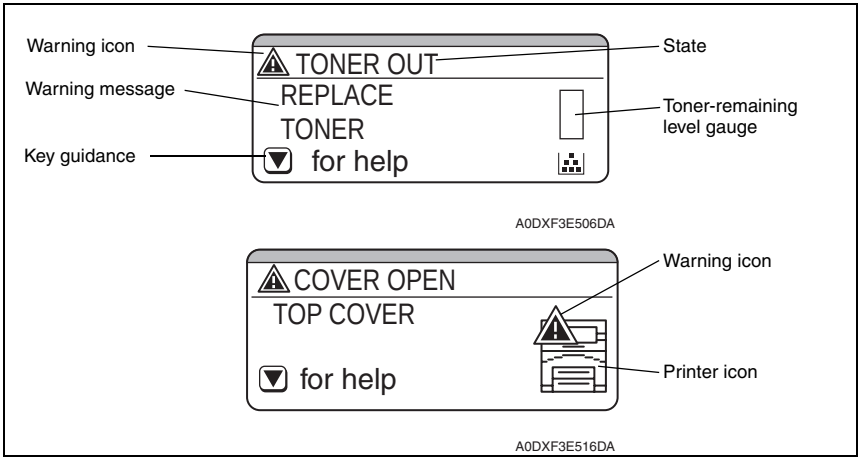
- For the details of each item, see “Menu.”
See P.88

8.1.4 Operator call messages

- These messages are displayed when minor error(s) that can be handled by user occur.
- The line-shaped LED lamp on the control panel lights up red steadily during operator call.
- The control panel displays the following when an operator call message is displayed.

Display	Description
LCD 1	A warning icon " ⚠ " is displayed and the state is displayed on the right (for example, TONER OUT).
LCD 2	Message is displayed (for example, REPLACE TONER).
LCD 3	
LCD 4	"▽ for help" is displayed. • By pressing the down key, the panel displays the help screen.

- In the case of an operator call message related to a toner cartridge, the toner-remaining level gauge is displayed.
- In the case of an operator call message for another reason, the printer icon is displayed with a flashing "warning icon ⚠."



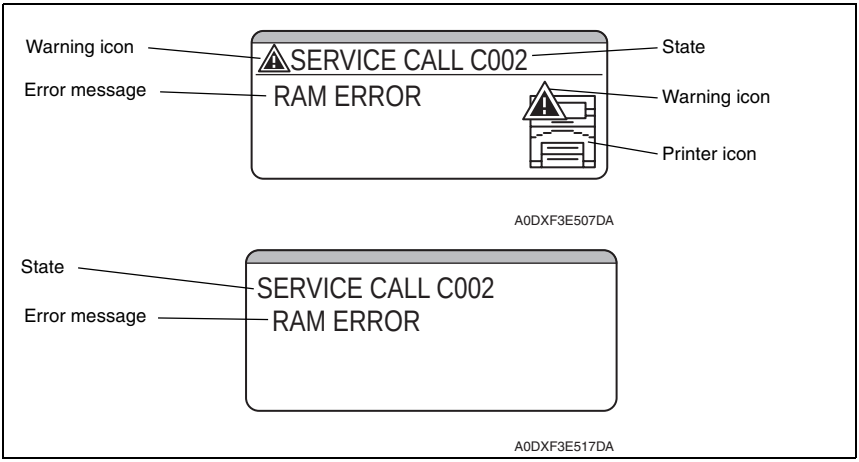
- For the details of each item, see "Operator call messages."
See P.79

8.1.5 Service call messages

- These messages are displayed when error(s) that cannot be handled by the user occur.
- The line-shaped LED lamp on the control panel lights up red steadily during service call.
- The control panel displays the following description at service call.

Display	Description
LCD 1	A "Warning icon ⚠" is displayed and the service call message and a 4-digit-service call ID are displayed on the right (for example, SERVICE CALL C002).
LCD 2	The error description is displayed (for example, RAM ERROR).
LCD 3	
LCD 4	No display

- A printer icon is displayed with a flashing "warning icon ⚠."
- A service call detected during startup of the printer is displayed as shown in the bottom of the following picture.



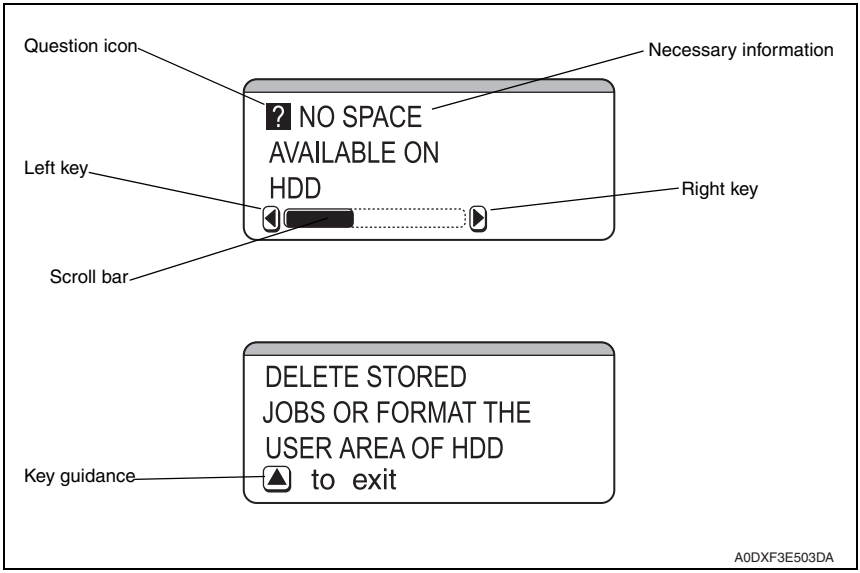
- For the details of each item, see "Service call messages."
See P.80

8.1.6 Help screen

- This screen is displayed when the down key ▽ is pressed when a warning or operator call message is displayed.
- The control panel displays the following description at the help screen.

Display	Description
LCD 1 LCD 2 LCD 3	A “Question icon ?” is displayed and the necessary information is displayed on the right (for example, “NO SPACE AVAILABLE ON HDD”).
LCD 4	A scroll bar or “△ to exit” message is displayed. • If there are several messages, a scroll bar is displayed. • By pressing the left key◁/right key▷, a previous/next screen message is displayed. • If all messages are displayed, “△ to exit” displays on the screen.

- A graphic is displayed if necessary.



8.2 List of control panel messages

NOTE

- **When two or more messages are to be displayed, the message with the higher priority will be displayed.**
- **When a message concerning consumables/periodic replacement parts (units) is displayed, print a statistics page from the [PRINT MENU] → [STATISTICS PAGE] menu and check the status of the other consumables, too.**

See P.93

8.2.1 Normal messages

A. Normal messages

Message (LCD1)	Description
INITIALIZING	The printer is being initialized
READY	Print enabled (Data not being printed)
OFFLINE	Off line condition (Data reception not available) • TELNET allows offline setting.
ENERGY SAVER	Machine in energy saver mode
PROCESSING	Print data processing (Data receiving - printer is started)
PRINTING	Data being printed (Printer is started)
COPYING	Data being printed in sets
WARMING UP	During warmup
CALIBRATING	Color shift correction in progress
CANCELING JOB	Job canceled
REBOOTING	The printer is restarting
FIRMWARE UPDATE	The printer's firmware is being upgraded

B. Warning messages

Priority	Message (LCD2/LCD3)	Description
High 1	UNABLE TO COLLATE JOB	Print in sets disabled (full hard disk) (This warning message is displayed during printing.)
2	HDD NEAR FULL	The hard disk space will run out soon.
3	MEMORY CARD NEAR FULL	The compact flash space will run out soon.
4	TONER OUT	The toner cartridge is empty.
5	FUSER UNIT END OF LIFE	Fuser unit service life has been reached. (Printing can be continued, but print quality is out of guarantee.)
6	TONER LOW	The toner cartridge will run out soon. (This message appears when SYS DEFAULT MENU/ENABLE WARNING/TONER LOW is set to ON.)
7	PAPER EMPTY TRAY X	No media in the specified tray. The specified tray is not installed, but it is set in the printer driver. (This message appears when SYS DEFAULT MENU/ENABLE WARNING/PAPER EMPTY is set to ON.)
8	PAPER LOW TRAY X	Media will soon run out. (tray 2/3/4) (This message appears when SYS DEFAULT MENU/ENABLE WARNING/PAPER LOW is set to ON.)
9	NON SUPPORT CARD	A compact flash card which is inserted is not supported. The compact flash card will be invalid.
10	INCORRECT HDD	A hard disk which was formatted by other unit is installed.
11	INCORRECT MEMORY CARD	A compact flash card which was formatted by other unit is installed.
12	HUBS NOT SUPPORTED	USB hub is connected to the USB host I/F.
Low 13	DEVICE NOT SUPPORTED	An unsupported USB memory device is connected to the USB host I/F. (This warning takes precedence over others, if occurring at the same time, for the corresponding message display for about 10 sec.)

8.2.2 Operator call messages

Priority	Message		Description
	LCD1	LCD2/LCD3	
High 1	INCORRECT TRAY	TURN OFF	An incorrect optional lower feeder unit is mounted. • In this condition, key operation on the control panel is disabled. • This message is available only on the pagepro 5650EN.
2	TONER MISSING	CHECK TONER	The toner cartridge is not installed.
3	COVER OPEN	TOP COVER	The top cover of the machine is open.
		REAR COVER	The rear cover of the machine is open.
		DUPLEX COVER *1	The duplex door is open.
		FINISHER COVER *2	The finisher cover is open.
4	PAPER JAM	SUB EXIT *2	A media jam has occurred at the sub tray of the optional offset tray.
		FUSER/EXIT	A media jam has occurred at the fusing section.
		TRANSFER	A media jam has occurred at the image transfer section.
		DUPLEX1 *1	A media jam has occurred at the duplex media feed section of the duplex.
		DUPLEX2 *1	A media jam has occurred at the duplex transport section of the duplex.
		TRAY1	A media jam has occurred at tray 1.
		TRAY2	A media jam has occurred at tray 2.
		TRAY3	A media jam has occurred at tray 3.
		TRAY4	A media jam has occurred at tray 4.
10	TONER OUT	REPLACE TONER	The toner cartridge has run out.
11	TRAYX SIZE ERR	ADD SSSS *3	The media size set in the printer driver does not match that of the media loaded in the specified tray. • Load “SSSS” size media in the specified tray.
12	PAPER EMPTY	SSSS *3 TTTT *3	• No specified media in trays 1 to 4. • Tray 3/4 is loaded with the specified media but is not set appropriately. • Displays when [TRAY CHAINING] is set to [ON].
	TRAYX EMPTY	SSSS *3 TTTT *3	• No specified media in the specified tray or tray 3/4 is not set appropriately. • Displays when [TRAY CHAINING] is set to [OFF].

Priority	Message		Description
	LCD1	LCD2/LCD3	
13	PAPER ERROR	SSSS *3 TTTT *3	• The size and type of media specified in the driver is not loaded in any tray. • A different size of media from the one specified in the driver is loaded in the tray at media feeding. • Displays when [TRAY CHAINING] is set to [ON].
	TRAYX PAPER ERR	SSSS *3 TTTT *3	• The size and type of media specified in the driver is not loaded in the specified tray. • A different size of media from the one specified in the driver is loaded in the specified tray at media feeding. • Displays when [TRAY CHAINING] is set to [OFF].
14	OUTPUT FULL	REMOVE PAPER (MAIN TRAY)	The printed media volume has reached maximum capacity in the exit tray of the main body.
		REMOVE PAPER (SUB TRAY) *2	The printed media volume has reached maximum capacity in the sub tray of the offset tray.
15	CHECK LEVER	FACE UP TRAY IS SELECTED	The face up lever is raised when duplex printing or sub tray output is specified.
16	MEMORY FULL	PRESS CANCEL	The volume of data to be printed exceeds the permissible amount of data to be processed by the machine's memory.
17	HOLD JOB ERROR	UNABLE TO STORE JOB	The specified data of the held job is being received, but an optional HDD is not installed.
Low 18		XXXX PRESS CANCEL	When printing a stored job, the printer configuration was changed since the job was stored.

*1: Only when the optional duplex is mounted.
*2: Only when the optional offset tray is mounted.
*3: SSSS represents the media size while TTTT shows the media type.

8.2.3 Service call messages

- For troubleshooting procedures, see “Troubleshooting”.
See P.158

Message		Description
LCD1 (Service Call ID)	LCD2/LCD3 (Error description)	
0017	MAIN MOTOR	Main motor malfunction
0046	FUSER FAN	Fusing cooling fan motor malfunction
0300	POLYGON MOTOR	Polygon motor malfunction
0500	FUSER ERROR	Heating roller warm-up failure
13E3	FLASH DEVICE	Flash ROM device fault
C002	RAM ERROR	RAM error at startup (standard memory)
C003		RAM error at startup (expanded memory)
C013	H/W ADDRESS	MAC address error at startup (MAC address is invalid)
C015	BOOT ROM	Boot ROM error at startup
C025	CONTROLLER ROM	Controller ROM error (Configuration information error)
C026		Controller ROM error (Access error)
C027		Controller ROM error (Data error)
C050	HDD ERROR	HDD access error
C051	HDD DISK FULL	HDD full error *1
C052	CARD ERROR	Compact flash access error
C053	CARD FULL	Compact flash full error *1
C054	CARD ERROR	Compact flash disconnected
C060	UPDATE ERROR	Firmware update error
C071	H/W CONFIGURATION ERROR	Hardware configuration error
FFFF	I/F COMMUNICATION ERROR	Interface communication error

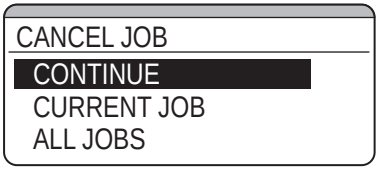
*1: If this error occurs, the device is automatically formatted when the printer is later restarted.

8.3 Cancelling a print job

- A print job being processed or printed can be cancelled by pressing the Cancel key.
- When no job has been sent, pressing the Cancel key has no effect.

1. If the Cancel key is pressed while a print job is being printed, a message appears on the control panel.
2. Select the job to be cancelled using the up key△/ down key▽ and press the MENU SELECT key.
   By pressing the Cancel key, the job cancel menu is closed.

Panel Display (LCD2-LCD4)	Description
CONTINUE	Continue printing the currently processing job.
CURRENT JOB	Stop printing the currently processing job.
ALL JOB	Stop printing all jobs, including the currently processing job and all jobs waiting to be printed.



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9. Menu

9.1 List of menu functions

MENU			Ref. page
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PRINT MENU	CONFIGURATION PG		P.92
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PAPER MENU	PAPER SOURCE	DEFAULT TRAY	P.98
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MENU				Ref. page
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MENU					Ref. page
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		POSTSCRIPT	WAIT TIMEOUT		P.115
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		GRADATION		P.131
	ALIGNMENT	TOP ADJUSTMENT		P.131
		LEFT ADJUSTMENT		P.131
		LD POWER		P.132
		VIDEO TIME LAG		P.132
	SUPPLIES	REPLACE	FUSER UNIT	P.132
	QUICK SETTING *6	UPDATE SETTING		P.133
		BACKUP SETTING		P.133

*1: It will be displayed only when an optional hard disk kit is installed.
*2: It will be displayed only when an optional hard disk kit or compact flash is installed.
*3: It will be displayed only when an optional duplex is installed.
*4: It will be displayed only when an optional hard disk kit or compact flash (1 GB or more) is installed.
*5: It will not be displayed when an optional offset tray is installed.
*6: It will be displayed only when a USB memory device is connected.
*7: It will be displayed only when an optional compact flash is installed.

9.2 PROOF/PRINT MENU

Function	• Selects and prints the job held temporarily in the printer. • Selects and deletes the job held temporarily in the printer. **NOTE** • **This menu is available only when an optional hard disk kit is installed.**
Use	• To proof one copy of a print job before printing the rest of the copies.
Setting /procedure	How to print the held job *1.* Select [PROOF/PRINT MENU] and press the Menu/Select key. *2.* Select user name and press the Menu/Select key. *3.* Select desired print job and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key. *5.* If the hold job is set as secured job, enter the password with the up key△/down key▽. *6.* Set the number of copies with the up key△/down key▽ and press the Menu/Select key. **NOTE** • **If the hold job is set as secured job, the held job cannot be printed until the correct password is entered at the printer control panel.** • **The held job is deleted automatically after the period of time specified in the "SYSTEM DEFAULT MENU/HOLD JOB TIMEOUT" menu.**
	How to delete the held job *1.* Select [PROOF/PRINT MENU] and press the Menu/Select key. *2.* Select user name and press the Menu/Select key. *3.* Select desired print job and press the Menu/Select key. *4.* Select [DELETE] and press the Menu/Select key. *5.* If the held job is set as secured job, enter the password with the up key△/down key▽. *6.* Select [YES] and press the Menu/Select key. **NOTE** • **If the hold job is set as secured job, the held job cannot be deleted until the correct password is entered.**

9.3 PRINT MENU

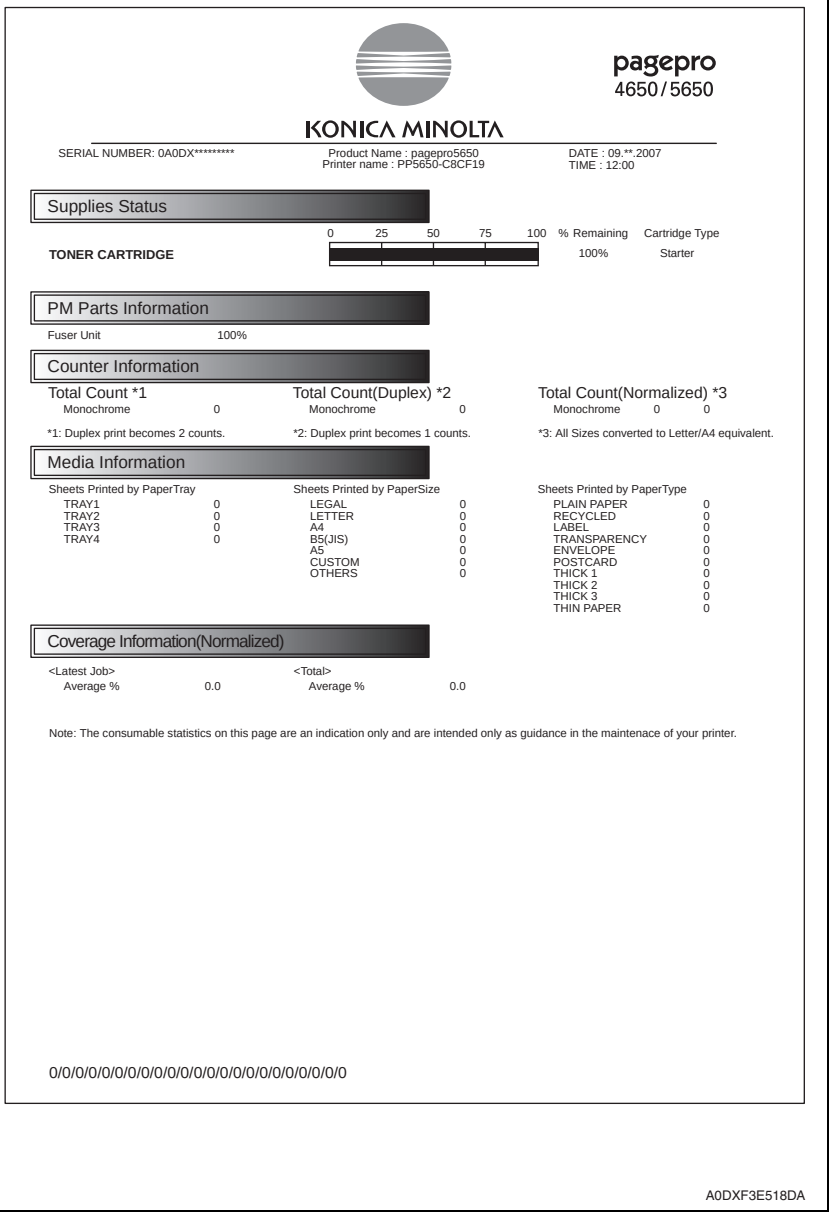
9.3.1 CONFIGURATION PG

Function	• Prints a configuration page.
Use	• To check the configuration and the setting values of the machine. The following items can be checked: PRINTER INFORMATION OPTIONS INTERFACE MENU PAPER MENU SYSTEM DEFAULT MENU QUALITY MENU MEMORY DIRECT
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

9.3.2 STATISTICS PAGE

Function	• Prints a statistics page.
Use	• To check consumable status and the usage of the machine. The following items can be checked: Supplies Status PM Parts Information Counter Information Media Information Coverage Information Consumable/periodic replacement parts (units) counter information*1 *1: For details, see the following table, “How to read consumable/periodic replacement parts (units) counter information.
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

A. Sample of STATISTICS PAGE



pagepro
4650 / 5650

KONICA MINOLTA

SERIAL NUMBER: 0A0DX*********
Product Name : pagepro5650
Printer name : PP5650-C8CF19
DATE : 09.**.2007
TIME : 12:00

Supplies Status

	0 25 50 75 100	% Remaining	Cartridge Type
TONER CARTRIDGE		100%	Starter

PM Parts Information

Fuser Unit	100%

Counter Information

Total Count *1		Total Count(Duplex) *2		Total Count(Normalized) *3		
Monochrome	0	Monochrome	0	Monochrome	0	0

*1: Duplex print becomes 2 counts.
*2: Duplex print becomes 1 counts.
*3: All Sizes converted to Letter/A4 equivalent.

Media Information

Sheets Printed by PaperTray		Sheets Printed by PaperSize		Sheets Printed by PaperType	
TRAY1	0	LEGAL	0	PLAIN PAPER	0
TRAY2	0	LETTER	0	RECYCLED	0
TRAY3	0	A4	0	LABEL	0
TRAY4	0	B5(JIS)	0	TRANSPARENCY	0
		A5	0	ENVELOPE	0
		CUSTOM	0	POSTCARD	0
		OTHERS	0	THICK 1	0
				THICK 2	0
				THICK 3	0
				THIN PAPER	0

Coverage Information(Normalized)

<Latest Job>		<Total>	
Average %	0.0	Average %	0.0

Note: The consumable statistics on this page are an indication only and are intended only as guidance in the maintenace of your printer.

0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0

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B. Supplies Status

- Display the estimated percent of life remaining in the toner cartridge.
  The type of the toner cartridges that are installed in the printer is also displayed (See the table below).

Types of toner cartridges	
Starter	• Toner cartridge included with a product shipped from the factory: 6.0 K
Standard	• Standard-capacity toner cartridge: 10.0 K
High	• High-capacity toner cartridge: 17.0 K

NOTE

- **The percent of life remaining in the toner cartridge can be used as a guide, but may not exactly reflect the amount that has been used in the toner cartridge.**

C. PM Parts Information

- Display the estimated percent of life remaining in periodic replacement parts (fuser unit).

D. Counter Information

- The total number of pages that have been printed is counted and displayed based on the description shown in the following table.

<Counter information list>

Types of count	Contents	Count timing
Total Count	• The total number of pages ejected from the printer. Increment by one per simplex and by two per duplex	When a sheet of media is ejected properly
Total Count (duplex)	• The total number of duplex sheets ejected from the printer. Increment by one per duplex (and by zero per simplex)	
Total Count (Normalized)	• The total number of pages on a A4 basis that have been ejected from the printer. Increment by 100 per A4 simplex and by 200 per A4 duplex *1	

*1: A count of 100 in the counter is converted to 1 sheet of media and display the number of decimals are discarded.

NOTE

- **The total counters and the print counters count at a different timing, when a sheet of media is properly ejected and when a sheet of media is fed, respectively. Therefore, the sum of each total counter value may not be same with the sum of each print counter value if a sheet of media cannot be ejected due to media jam inside the machine or other possible problems.**

E. Media Information

- The number of sheets printed for each paper tray, media size, and media type is counted and displayed according to the conditions shown in the following table.

<Media information list>

Types of count	Contents	Count timing
Sheets Printed by Paper Tray	• The number of sheets taken up for each paper tray	Upon media feed
Sheets Printed by Paper Size	• The number of sheets printed for each paper size	
Sheets Printed by Paper Type	• The number of sheets printed for each paper type	

F. Coverage Information

- Each coverage information is calculated and displayed based on the description shown in the following table.

<Coverage information list>

Coverage information	Contents
Latest Job	• Individual average dot coverage in the last job is calculated on an A4 basis. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)
Total	• Individual average dot coverage is calculated on an A4 basis for all prints performed after the printer was installed. (The average of the ratios of dot space on each page when the printable area is defined as 100% and shown in 0.1 percent increments)

NOTE

- **Coverage information can be used as a guide and may not completely reflect the actual amount of toner used.**

G. How to read consumable/periodic replacement parts (units) counter information

- The lower left part of the statistics page shows numerical values that represent consumable/periodic replacement parts (units) counter information.
  The table below explains counter information that is provided by each numerical data.

<Display on the statistics page>

0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0/0	7J07

<Meaning of counter value> (From the left of the numerical values)

No.	Contents	
1	Number of times a High-capacity toner cartridge has been replaced	
2	Number of times a Standard-capacity toner cartridge has been replaced	
3	Not used. (The value doesn't change.)	
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19	Rate of fuser unit use (%)	
20	Number of times a fuser unit has been replaced	
1	Start date of use *1	Year (e.g. The year 2007 is displayed as 7.)
2		Month (e.g. January is displayed as A. February is B. March is C. And December is L.)
3		Day (e.g. The day 7 is displayed as 07.)

*1: Start date of use begins when 100 prints are complete after the first new toner cartridge was detected following the main body installation.

9.3.3 FONT LIST

A. POSTSCRIPT

Function	• Prints a postscript font list.
Use	• To determine which postscript fonts are available on the printer.
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

B. PCL

Function	• Prints a PCL font list.
Use	• To determine which PCL fonts are available on the printer.
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

9.3.4 MENU MAP

Function	• Prints a menu map.
Use	• To see the printer's menu structure.
Setting /procedure	• Select [PRINT] and press the Menu/Select key.

9.3.5 DIRECTORY LIST

Function	• Prints a directory list of the hard disk kit's contents.
Use	• To check the data saved in the optional hard disk kit.
Setting /procedure	• Select [PRINT] and press the Menu/Select key. **NOTE** **• This menu is available only when an optional hard disk kit or compact flash is installed.**

9.4 PAPER MENU

9.4.1 PAPER SOURCE

A. DEFAULT TRAY

Function	• Sets the priority feed tray.
Use	• To set the priority media feed tray.
Setting /procedure	*1.* Select [DEFAULT TRAY] and press the Menu/Select key. *2.* Select desired tray and press the Menu/Select key. • The default setting is TRAY 1. "TRAY 1" TRAY 2 TRAY 3 TRAY 4 **NOTE** **• TRAY 3/TRAY 4 can be selected only when one or more optional lower feeder units are installed.**

B. TRAY 1

(1) PAPER SIZE

Function	• Sets the size of the media in tray 1.
Use	• To specify the size of the media loaded in tray 1.
Setting /procedure	*1.* Select [PAPER SIZE] and press the Menu/Select key. *2.* Select desired paper size and press the Menu/Select key. For North America • The default setting is LETTER. For other destinations • The default setting is A4. ANY/LETTER/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATEMENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/KAI 16/KAI 32/ENV C5/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/ENV CHOU#4/B5(ISO)/ENV #10/ENV YOU#4/JPOST/JPOST-D/CUSTOM **NOTE** **• ANY specifies any media size.** **• CUSTOM is used to set a "custom media size."** **• The currently detected size is displayed if "AUTO" is set for [SIZE SETTING].**

(2) CUSTOM SIZE

Function	• Sets the custom size of media in tray 1.
Use	• To specify the custom size media loaded in tray 1.
Setting /procedure	*1.* Select [CUSTOM SIZE] and press the Menu/Select key. *2.* Select [WIDTH] or [LENGTH] and press Menu/Select key. *3.* Set desired number with the up key△/down key▽ and press the Menu/Select key. <For North America> • The default setting of WIDTH is 8.50 inches. WIDTH: 3.00 inches to 8.50 inches. • The default setting of LENGTH is 11.00 inches. LENGTH: 5.00 inches to 35.43 inches. <For other destinations> • The default setting of WIDTH is 210 mm. WIDTH: 76 mm to 216 mm. • The default setting of LENGTH is 297 mm. LENGTH: 127 mm to 900 mm. **NOTE** **• By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.**

(3) PAPER TYPE

Function	• Sets the media type for tray 1.
Use	• To specify the type of media loaded in tray 1.
Setting /procedure	*1.* Select [PAPER TYPE] and press the Menu/Select key. *2.* Select desired paper type and press Menu/Select key. • The default setting is PLAIN PAPER. ANY/PLAIN PAPER/RECYCLED/THICK 1/THICK 2/THICK 3/LABEL/TRANSPARENCY/ENVELOPE/POSTCARD/THIN PAPER **NOTE** • **ANY identifies any media type.** • **THICK 3 and THIN PAPER are selectable only on the pagepro 5650EN.**

(4) SIZE SETTING

Function	• Selects whether the paper size of tray 1 is to be detected automatically or manually.
Use	• To load paper of a size that cannot be detected automatically.
Setting /procedure	• The default setting is “AUTO.” “AUTO” USER SELECT

C. TRAY 2

(1) PAPER SIZE

Function	• Sets the size of the media in tray 2.
Use	• To specify the size of the media loaded in tray 2.
Setting /procedure	*1.* Select [PAPER SIZE] and press the Menu/Select key. *2.* Select desired paper size and press the Menu/Select key. For North America • The default setting is LETTER. For other destinations • The default setting is A4. LETTER/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATEMENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/KAI 16/KAI 32/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/B5(ISO)/ENV #10/ENV YOU#4/JPOST/JPOST-D/CUSTOM **NOTE** • **ANY specifies any media size.** • **CUSTOM is used to set a “custom media size.”** • **The currently detected size is displayed if “AUTO” is set for [SIZE SETTING].**

(2) CUSTOM SIZE

Function	• Sets the custom size of media in tray 2.
Use	• To specify the custom size media loaded in tray 2.
Setting /procedure	*1.* Select [CUSTOM SIZE] and press the Menu/Select key. *2.* Select [WIDTH] or [LENGTH] and press Menu/Select key. *3.* Set desired number with the up key△/down key▽ and press the Menu/Select key. <For North America> • The default setting of WIDTH is 8.50 inches. WIDTH: 3.87 inches to 8.50 inches. • The default setting of LENGTH is 11.00 inches. LENGTH: 5.83 inches to 14.00 inches. <For other destinations> • The default setting of WIDTH is 210 mm. WIDTH: 98 mm to 216 mm. • The default setting of LENGTH is 297 mm. LENGTH: 148 mm to 356 mm. **NOTE** • **By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.**

(3) PAPER TYPE

Function	• Sets the media type for tray 2.
Use	• To specify the type of media loaded in tray 2.
Setting /procedure	*1.* Select [PAPER TYPE] and press the Menu/Select key. *2.* Select desired paper type and press Menu/Select key. • The default setting is PLAIN PAPER. ANY/PLAIN PAPER/RECYCLED/THICK 1/THICK 2/THICK 3/LABEL/TRANSPARENCY/ENVELOPE/POSTCARD/THIN PAPER **NOTE** • **ANY identifies any media type.** • **THICK 3 and THIN PAPER are selectable only on the pagepro 5650EN.**

(4) SIZE SETTING

Function	• Selects whether the paper size of tray 2 is to be detected automatically or manually.
Use	• To load paper of a size that cannot be detected automatically.
Setting /procedure	• The default setting is “AUTO.” “AUTO” USER SELECT

D. TRAY 3/TRAY4

- It will be displayed only when the optional lower feeder unit(s) is installed.

(1) PAPER SIZE

Function	• Sets the size of the media in tray 3/4.
Use	• To specify the size of the media loaded in tray 3/4.
Setting /procedure	*1.* Select [PAPER SIZE] and press the Menu/Select key. *2.* Select desired paper size and press the Menu/Select key. For North America • The default setting is LETTER. For other destinations • The default setting is A4. LETTER/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATEMENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/KAI 16/KAI 32/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/B5(ISO)/ENV #10/ENV YOU#4/JPOST/JPOST-D/CUSTOM **NOTE** **• ANY specifies any media size.** **• CUSTOM is used to set a "custom media size."** **• The currently detected size is displayed if "AUTO" is set for [SIZE SETTING].**

(2) CUSTOM SIZE

Function	• Sets the custom size of media in tray 3/4.
Use	• To specify the custom size media loaded in tray 3/4.
Setting /procedure	*1.* Select [CUSTOM SIZE] and press the Menu/Select key. *2.* Select [WIDTH] or [LENGTH] and press Menu/Select key. *3.* Set desired number with the up key△/down key▽ and press the Menu/Select key. <For North America> • The default setting of WIDTH is 8.50 inches. WIDTH: 3.87 inches to 8.50 inches. • The default setting of LENGTH is 11.00 inches. LENGTH: 5.83 inches to 14.00 inches. <For other destinations> • The default setting of WIDTH is 210 mm. WIDTH: 98 mm to 216 mm. • The default setting of LENGTH is 297 mm. LENGTH: 148 mm to 356 mm. **NOTE** **• By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.**

(3) PAPER TYPE

Function	• Sets the media type for tray 3/4.
Use	• To specify the type of media loaded in tray 3/4.
Setting /procedure	*1.* Select [PAPER TYPE] and press the Menu/Select key. *2.* Select desired paper type and press Menu/Select key. • The default setting is PLAIN PAPER. ANY/PLAIN PAPER/RECYCLED/THICK 1/THICK 2/THICK 3/LABEL/TRANSPARENCY/ENVELOPE/POSTCARD/THIN PAPER **NOTE** **• ANY identifies any media type.** **• THICK 3 and THIN PAPER are selectable only on the pagepro 5650EN.**

(4) SIZE SETTING

Function	• Selects whether the paper size of tray 3/4 is to be detected automatically or manually.
Use	• To load paper of a size that cannot be detected automatically.
Setting /procedure	• The default setting is “AUTO.” “AUTO” USER SELECT

E. TRAY CHAINING

Function	• Sets auto tray switching.
Use	• To specify that the printer should pull media from another tray when the specified tray runs is empty.
Setting /procedure	• The default setting is “ON.” “ON” OFF

F. TRAY MAPPING

(1) TRAY MAPPING MODE

Function	• Selects whether or not the tray mapping function is used.
Use	• To specify whether trays are mapped.
Setting /procedure	• The default setting is OFF. ON “OFF”

(2) LOGICAL TRAY0-9

Function	• Specifies whether jobs received from another manufacturer's printer driver are printed using tray 1 to tray 4.
Use	• To specify the media source for print jobs using another manufacturer's printer driver.
Setting /procedure	• Only the default for LOGICAL TRAY 2 is PHYSICAL TRAY 2. PHYSICAL TRAY 1 is the default for all trays other than LOGICAL TRAY 2. PHYSICAL TRAY 1 PHYSICAL TRAY 2 PHYSICAL TRAY 3 PHYSICAL TRAY 4 **NOTE** **• Only the mounted tray can be selected.**

9.4.2 DUPLEX

Function	• Sets duplex printing mode.
Use	• To specify duplex printing. OFF : Duplex print is OFF LONG EDGE : Duplex print is ON, long edge SHORT EDGE : Duplex print is ON, short edge
Setting /procedure	• The default setting is “OFF.” “OFF” LONG EDGE SHORT EDGE **NOTE** • **This menu is available only when a duplex is mounted.**

9.4.3 COPIES

Function	• Sets the number of prints.
Use	• To specify the number of copies of the job to be printed.
Setting /procedure	*1.* Select [COPIES] and press the Menu/Select key. *2.* Select desired print number with the up key△/down key▽ and press the Menu/Select key. • The default setting is “1” copy. “1” copy to 9999 copies.

9.4.4 COLLATE

Function	• Sets printing in sets.
Use	• To print several sets of multiple pages. ON : Print in sets. OFF : Print in page.
Setting /procedure	• The default setting is OFF. ON “OFF” **NOTE** • **This menu is available only when an optional hard disk kit or compact flash (1 GB or more) is installed.** • **The setting in the printer driver overrides the setting in this menu.**

9.4.5 FINISHING

Function	• Selects an exit tray and finishing option at the offset tray.
Use	• To select an exit tray and finishing option when a optional offset tray is installed. MAIN TRAY : Printing to the main tray SUB TRAY : Printing to the sub tray OFFSET : The media is fed to the sub tray with each copy slightly shifted.
Setting /procedure	• The default setting is MAIN TRAY. "MAIN TRAY" SUB TRAY OFFSET **NOTE** **• This menu is available only when a offset tray is installed.** **• The setting in the printer driver overrides the setting in this menu.** **• OFFSET function is available only for the following media sizes.** **Paper size: 89 to 216 mm in width and 140 to 356 mm in length**

9.4.6 JOB SEPARATION

Function Use	• Selects whether or not to use a shift function for each job that prints to the offset tray.
Setting /procedure	• The default setting is OFF. ON "OFF" **NOTE** **• This menu is available only when a offset tray is installed.** **• This setting is disabled when "SUB TRAY" or "OFFSET" is selected for [FINISHING].** **• This function is available only for the following media sizes.** **Paper size: 89 to 216 mm in width and 140 to 356 mm in length**

9.5 QUALITY MENU

9.5.1 RESOLUTION

Function Use	• Sets the print resolution.
Setting /procedure	• The default setting is 600. "600" 1200

9.5.2 BRIGHTNESS

Function	• Sets the brightness of the printed image.
Use	• To adjust the brightness of the printed image.
Setting /procedure	• The default setting is 0 %. -15 % -10 % -5 % "0 %" +5 % +10 % +15 %

9.5.3 CONTRAST

Function	• Sets the contrast of the printed image.
Use	• To adjust the contrast of the printed image.
Setting /procedure	• The default setting is 0 %. -15 % -10 % -5 % "0 %" +5 % +10 % +15 %

9.5.4 HALFTONE

A. IMAGE PRINTING

Function	• Sets the halftone characteristic of image to be printed.
Use	• To set the halftone characteristic that is used for the printed image (picture.) LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image.
Setting /procedure	• The default setting is DETAIL. LINE ART "DETAIL" SMOOTH

B. TEXT PRINTING

Function	• Sets the halftone characteristic of the text to be printed.
Use	• To set the halftone characteristic that is used for printing text (letter). LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image.
Setting /procedure	• The default setting is LINE ART. "LINE ART" DETAIL SMOOTH

C. GRAPHICS PRINTING

Function	• Sets the halftone characteristic for graphics printing.
Use	• To set the halftone characteristic that is used for printing graphics (figures). LINE ART : HALFTONE characteristic that emphasizes the resolution of the print image. DETAIL : HALFTONE characteristic that emphasizes the balance between the resolution and the tone reproducibility of the print image. SMOOTH : HALFTONE characteristic that emphasizes the tone reproducibility of the print image.
Setting /procedure	• The default setting is LINE ART. LINE ART "DETAIL" SMOOTH

9.5.5 ECONOMY PRINT

Function	• Selects whether or not to use the economy print mode where job prints with lower print density and less toner consumption.
Use	• To reduce toner consumption • In the economy print mode, toner consumption will be reduced by approx. 30 % compared to the normal mode.
Setting /procedure	• The default setting is OFF. ON “OFF”

9.6 MEMORY DIRECT

- This menu appears only when the optional hard disk kit or the compact flash is installed.
- This menu does not appear when “DISABLE” is selected in the [INTERFACE MENU] → [MEMORY DIRECT] setting.

9.6.1 LIST OF FILES

Function	• Displays folders and files stored in a USB memory connected to the USB port and sends print jobs.
Use	• To select files to be printed with the USB memory direct print function. • The maximum of 99 files and folders in total can be displayed. • The maximum of 7 folder hierarchies can be displayed.
Setting /procedure	*1.* Insert a USB memory into the USB port. *2.* Select [MEMORY DIRECT] → [LIST OF FILES] and select files to be printed then press the Menu/Select key. (When a desired file is in a folder, select the folder that includes the file and press the Menu/Select key.) *3.* Specify a media type, duplex printing ON/OFF, the number of copies, and other necessary settings. *4.* Select [PRINT] and press the Menu/Select key. **NOTE** • **Do not remove the USB memory from the main body during memory direct printing.**

9.6.2 TYPE OF FILES

Function	• Specifies the types of files to be displayed on [LIST OF FILES].
Use	• To limit the types of files that can be listed.
Setting /procedure	• The default setting is PDF,XPS. PDF,XPS,JPEG,TIFF “PDF,XPS”

9.7 INTERFACE MENU

9.7.1 JOB TIMEOUT

Function	• Sets the time to activate JOB TIMEOUT.
Use	• To specify the amount of time before a print job times out.
Setting /procedure	• The default setting is 15 seconds. 5 seconds to 300 seconds

9.7.2 ETHERNET

NOTE

• When the ETHERNET setting is changed, the printer restarts automatically.

A. TCP/IP

(1) ENABLE

Function	• Enables TCP/IP.
Use	• To specify that the printer is connected to a TCP/IP network. YES : Enable TCP/IP. Print can be made at TCP/IP environment. NO : Disable TCP/IP. Print cannot be made at TCP/IP environment.
Setting /procedure	• The default setting is YES. "YES" NO **NOTE** **• The folowing screen displays only when [ENABLE/YES] is selected. IP ADDRESS/SUBNET MASK/DEFAULT GATEWAY/DHCP/BOOTP/ARP/PING/ HTTP/FTPTELNET/BONJOUR/DYNAMIC DNS/IPP/RAW PORT/SLP/SMTP/ SNMP/WSD PRINT/IPSEC/IP ADDRESS FILTER/IPv6**

(2) IP ADDRESS

Function	• Sets the IP address of the printer used for the network.
Use	• To set the printer's IP address.
Setting /procedure	*1.* Select [IP ADDRESS] and press the Menu/Select key. *2.* Set desired IP address (first bite) with the up key△/down key▽ and press the right key▷. *3.* Repeat the above procedures and set the IP address up to fourth bite. *4.* Press the Menu/Select key. **NOTE** **• When setting the IP address manually, [DHCP], [BOOTP] and [ARP/PING] settings are set to [OFF] automatically.** **• When IP address is not allocated from the server, the IP address is set automatically within the range "169.254.0.0. to 169.254.255.255."**

(3) SUBNET MASK

Function	• Sets the subnet mask of the printer used in the network.
Use	• To set the printer's subnet mask.
Setting /procedure	*1.* Select [SUBNET MASK] and press the Menu/Select key. *2.* Set desired subnet mask (first bite) with the up key△/down key▽ and press the right key ▷. *3.* Repeat the above procedures and set the subnet mask up to fourth bite. *4.* Press the Menu/Select key. • The default setting is "000.000.000.000." 000.000.000.000 to 255.255.255.255

(4) DEFAULT GATEWAY

Function	• Sets the gateway address of the printer used in the network.
Use	• To set the printer's gateway address.
Setting /procedure	*1.* Select [DEFAULT GATEWAY] and press the Menu/Select key. *2.* Set desired default gateway address (first bite) with the up key△/down key▽ and press the right key▷. *3.* Repeat the above procedures and set the default gateway address up to fourth bite. *4.* Press the Menu/Select key. • The default setting is "000.000.000.000." 000.000.000.000 to 255.255.255.255

(5) DHCP

Function	• Automatically acquires an IP address from the DHCP server, if there is one in the network, and specifies whether to load other network information.
Use	• To automatically acquire an IP address and load other network information. ON : Enable IP auto acquisition setting. OFF : Disable IP auto acquisition setting.
Setting /procedure	• The default setting is ON. "ON" OFF **NOTE** • **When setting the IP address manually, the [DHCP] setting is changed to [OFF].**

(6) BOOTP

Function	• Automatically acquires an IP address from BOOTP and specifies whether to load other network information.
Use	• To automatically acquire an IP address and load other network information. ON : Enable IP auto acquisition setting. OFF : Disable IP auto acquisition setting.
Setting /procedure	• The default setting is OFF. ON "OFF" **NOTE** • **When setting the IP address manually, the [BOOTP] setting is changed to [OFF].**

(7) ARP/PING

Function	• Select whether or not the IP address is automatically acquired.
Use	• To automatically acquire an IP address and load other network information. ON : Enable IP auto acquisition setting. OFF : Disable IP auto acquisition setting.
Setting /procedure	• The default setting is OFF. ON "OFF" **NOTE** • **When setting the IP address manually, the [ARP/PING] setting is changed to [OFF].**

(8) HTTP

Function	• Enables HTTP.
Use	• To enable HTTP. YES : HTTP is enabled. NO : HTTP is disabled.
Setting /procedure	• The default setting is YES. "YES" NO **NOTE** • **Setting this function to "NO" will automatically set [IPP] to "NO."**

(9) FTP

Function	• Enables FTP.
Use	• To enable FTP. YES : FTP is enabled. NO : FTP is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

(10) TELNET

Function	• Select whether to enable or disable TELNET transmissions.
Use	• To specify that the printer is connected by TELNET transmissions.
Setting /procedure	• The default setting is ENABLE. "ENABLE" DISABLE

(11) BONJOUR

Function	• Select whether or not to use the bonjour setting.
Use	• To use when operating under the bonjour service environment. YES : Bonjour is enabled. NO : Bonjour is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

(12) DYNAMIC DNS

Function	• Select whether or not to use the dynamic DNS setting.
Use	• To use when operating under the dynamic DNS service environment. YES : Dynamic DNS is enabled. NO : Dynamic DNS is disabled.
Setting /procedure	• The default setting is NO. YES “NO”

(13) IPP

Function Use	• To set whether to enable or disable IPP setting. YES : IPP is enabled. NO : IPP is disabled.
Setting /procedure	• The default setting is YES. “YES” NO

(14) RAW PORT

<ENABLE>

Function Use	• To set whether to enable or disable raw port setting. YES : Raw port is enabled. NO : Raw port is disabled.
Setting /procedure	• The default setting is YES. “YES” NO

<BIDIRECTIONAL>

Function Use	• Enables or disables bi-directional communication for the raw port. ON : Raw port is enabled for bi-directional communication. OFF : Raw port is disabled for bi-directional communication.
Setting /procedure	• The default setting is OFF. ON “OFF”

(15) SLP

Function Use	• To set whether to enable or disable SLP setting. YES : SLP is enabled. NO : SLP is disabled.
Setting /procedure	• The default setting is YES. “YES” NO

(16) SMTP

Function Use	• To set whether to enable or disable SMTP setting. YES : SMTP is enabled. NO : SMTP is disabled.
Setting /procedure	• The default setting is YES. “YES” NO

(17) SNMP

Function Use	• To set whether to enable or disable SNMP setting. YES : SNMP is enabled. NO : SNMP is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

(18) WSD PRINT

Function Use	• To set whether to use this printer as a WSD printer. YES : WSD print is enabled. NO : WSD print is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

(19) IPSEC

Function	• To set whether to use IPsec protocol for IP network communication.
Use	• When IPsec protocol is used to perform encrypted communication. YES : IPsec is enabled. NO : IPsec print is disabled.
Setting /procedure	• The default setting is NO. YES "NO"

(20) IP ADDRESS FILTER

<ACCESS PERMISSION>

Function Use	• To set the IP filtering (access permission). ENABLE : Access permission is enabled. DISABLE : Access permission is disabled. **NOTE** • **The range for the IP addresses, to which access is enabled, is set using the PageScope Web Connection.**
Setting /procedure	• The default setting is DISABLE. ENABLE "DISABLE"

<ACCESS REFUSE>

Function Use	• To set the IP filtering (access refuse). ENABLE : Access refuse is enabled. DISABLE : Access refuse is disabled. **NOTE** • **The range for the IP addresses, to which access is disabled, is set using the PageScope Web Connection.**
Setting /procedure	• The default setting is DISABLE. ENABLE "DISABLE"

(21) IPV6

<ENABLE>

Function Use	• To set whether to use IPv6 in IP network communication. YES : IPv6 is enabled. NO : IPv6 is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

<AUTO SETTING>

Function Use	• To set whether to use the IPv6 address automatic acquisition setting. YES : IPv6 address is automatically obtained. NO : IPv6 auto configuration is disabled.
Setting /procedure	• The default setting is YES. "YES" NO

<LINK LOCAL>

Function Use	• Displays the link-local address of IPv6.

<GLOBAL ADDRESS>

Function Use	• Displays the global address of IPv6.

<GATEWAY ADDRESS>

Function Use	• Displays the gateway address of IPv6.

B. NETWARE

Function	• Enables NetWare.
Use	• To specify that the printer is connected to a NetWare network. YES : Enable NetWare. Printing can be done via NetWare. NO : Disable NetWare. Printing cannot be done via NetWare.
Setting /procedure	• The default setting is NO. YES "NO"

C. APPLETALK

Function	• Enables AppleTalk.
Use	• To specify that the printer is connected to an AppleTalk network. YES : Enable AppleTalk. Printing can be done via AppleTalk. NO : Disable Apple Talk. Printing cannot be done via AppleTalk.
Setting /procedure	• The default setting is YES. "YES" NO

D. SPEED/DUPLEX

Function	• Sets the communication speed and method of network.
Use	• To set the network communication speed and method.
Setting /procedure	• Setting items Network speed (SPEED): AUTO, 10 Mbps, 100 Mbps, 1,000 Mbps Duplex mode (DUP): AUTO, full-duplex mode, half-duplex mode • The default setting is AUTO. "AUTO" 10BASE FULL 10BASE HALF 100BASE FULL 100BASE HALF 1000BASE FULL

E. IEEE802.1X

Function	• Enables IEEE802.1X.
Use	• To carry out wireless LAN communication. YES : IEEE802.1X is enabled. NO : IEEE802.1X is disabled.
Setting /procedure	• The default setting is NO. YES "NO"

9.7.3 MEMORY DIRECT

Function	• Select whether to enable or disable memory direct printing. ENABLE : MEMORY DIRECT menu is appeared, and memory direct printing is enabled. DISABLE : MEMORY DIRECT menu is disappeared, and memory direct printing is disabled.
Use	
Setting /procedure	• The default setting is ENABLE. "ENABLE" DISABLE

9.8 SYS DEFAULT MENU

9.8.1 LANGUAGE

Function	• Sets the language of the control panel display.
Use	• To change the language of the control panel display at user's option.
Setting /procedure	• The default setting is "ENGLISH." "ENGLISH" / FRENCH / GERMAN / SPANISH / ITALIAN / PORTUGUESE / CZECH / JAPANEASE / KOREAN / SIMPLIFIED CHINESE / TRADITIONAL CHINESE/ DUTCH / RUSSIAN / POLISH

9.8.2 EMULATION

A. DEF. EMULATION

Function	• To set the PDL (Page Description Language).
Use	• To fix the PDL as necessary. It usually switches automatically.
Setting /procedure	• The default setting is AUTO. "AUTO" POSTSCRIPT PCL

B. POSTSCRIPT
(1) WAIT TIMEOUT

Function	• Sets the amount of time to wait for a postscript file.
Use	• To set the amount of time to wait for a postscript file before the print job times out.
Setting /procedure	*1.* Select [WAIT TIMEOUT] and press the Menu/Select key. *2.* Select desired time with the up key△/down key▽ and press the Menu/Select key. • The default setting is 0 second. "0" second to 300 seconds.

(2) PS ERROR PAGE

Function	• Specifies whether error pages are printed at the time of a postscript error.
Use	• To specify whether error pages are printed after a postscript error occurs. ON : Error pages are printed at the time of postscript error. OFF : Error pages are not printed at the time of postscript error.
Setting /procedure	• The default setting is OFF. ON "OFF"

(3) PS PROTOCOL

Function	• Sets the protocol to be used for postscript printing.
Use	• To use the protocol when printing by postscript printing. AUTO : Automatic recognition NORMAL : ASCII letter code data BINARY : Binary data
Setting /procedure	• The default setting is AUTO. "AUTO" NORMAL BINARY

C. PCL
(1) CR/LF MAPPING

Function	• Sets the linefeed code for PCL printing.
Use	• To specify the type of linefeed to be used for PCL printing.
Setting /procedure	• The default setting is "CR=CR LF=LF." "CR=CR LF=LF" CR=CRLF LF=LF CR=CR LF=LFCR CR=CRLF LF=LFCR

(2) LINES PER PAGE

Function	• Sets the lines per page for PCL printing.
Use	• To set the number of lines to be printed per page for PCL jobs.
Setting /procedure	*1.* Select [LINES PER PAGE] and press the Menu/Select key. *2.* Select desired line number with the up key△/down key▽ and press the Menu/Select key. • The default setting is 60 lines. 5 lines to 128 lines

(3) FONT SOURCE

<FONT NUMBER>

Function	• Sets the PCL font to be used for PCL printing.
Use	• To set the font to be used for printing PCL jobs.
Setting /procedure	*1.* Select [FONT NUMBER] and press the Menu/Select key. *2.* Select desired font with the up key△/down key▽ and press the Menu/Select key. • The default setting is 0. "0" to 102 **NOTE** • **According to the selected [FONT NUMBER], [PITCH SIZE] or [POINT SIZE] setting is available.** • **Details on the font which corresponds to the font No. can be checked by the PCL font list.** See P.98

<PITCH SIZE/POINT SIZE>

Function	• Sets the pitch size of the PCL font for PCL printing.
Use	• To set the pitch size of the font to be used for printing PCL jobs.
Setting /procedure	*1.* Select [PITCH SIZE] and press the Menu/Select key. *2.* Select desired pitch size with the up key△/down key▽ and press the Menu/Select key. • The default setting is 10.00 pt. 0.44 pt to 99.99 pt **NOTE** • **When one of the following "FONT NUMBERs" is selected, "PITCH SIZE" setting is available.** **FONT NUMBER: 0 to 5, 21 to 23, 54 to 57, 81, 82.**

<SYMBOL SET>

Function	• Sets the symbol set for PCL printing.
Use	• To set the symbol set to be used for printing PCL jobs.
Setting /procedure	• The default setting is PC8. "PC8" / DESKTOP / ISO4 / ISO6 / ISO11 / ISO15 / ISO17 / ISO21 / ISO60 / ISO69 / ISOL1 / ISOL2 / ISOL5 / ISOL6 / ISOL9 / LEGAL / MATH8 / MCTEXT / MSPUBL / PC775 / PC850 / PC852 / PC858 / PC8DN / PC8TK / PC1004 / PIFONT / PSMATH / PSTEXT / ROMAN8 / WIN30 / WINBALT / WINL1 / WINL2 / WINL5 / ARABIC8 / HPWARA / PC864ARA / HEBREW7 / HEBREW8 / ISOHEB / PC862HEB / ISOCYR / PC866CYR / WINCYR / PC866UKR / GREEK8 / WINGRK / PC851GRK / PC8GRK / ISOGRK

D. XPS

(1) DEGITAL SIGNATURE

Function	• Selects whether to verify digital signatures attached to XPS (XML Paper Specification) files when printing the files. • When ON is selected, files with invalid digital signatures are not printed.
Use	
Setting /procedure	• The default setting is DISABLE. ENABLE "DISABLE"

(2) XPS ERROR PAGE

Function	• To set whether to print error information when an error occurs while printing a XPS use file. ON : XPS error page is printed when an XPS error occurs. OFF : No XPS error page is printed when an XPS error occurs.
Use	
Setting /procedure	• The default setting is ON. "ON" OFF

9.8.3 PAPER

A. DEFAULT PAPER

(1) PAPER SIZE

Function	• Sets the default media size.
Use	• To set the default media size.
Setting /procedure	<For North America> • The default setting is LETTER. <For other destinations> • The default setting is A4. LETTER/LEGAL/EXECUTIVE/A4/A5/A6/B5(JIS)/B6(JIS)/GOVT LETTER/STATEMENT/FOLIO/SP FOLIO/UK QUARTO/FOOLSCAP/GOVT LEGAL/16K/KAI 16/KAI 32/ENV C5/ENV C6/ENV DL/ENV MONARCH/ENV CHOU#3/ENV CHOU#4/B5(ISO)/ENV #10/ENV YOU#4/JPOST/JPOST-D/CUSTOM

(2) CUSTOM SIZE

Function	• Sets the custom media width and length.
Use	• To set the width and length of the custom media size.
Setting /procedure	*1.* Select [CUSTOM SIZE] and press the Menu/Select key. *2.* Select [WIDTH] or [LENGTH] and press Menu/Select key. *3.* Set desired number with the up key△/down key▽ and press the Menu/Select key. <For North America> • The default setting of WIDTH is 8.50 inches. WIDTH: 3.00 inches to 8.50 inches. • The default setting of LENGTH is 11.00 inches. LENGTH: 5.00 inches to 14.00 inches. <For other destinations> • The default setting of WIDTH is 210 mm. WIDTH: 76 mm to 216 mm. • The default setting of LENGTH is 297 mm. LENGTH: 127 mm to 356 mm. **NOTE** **• By changing the [UNIT OF MEASURE] setting (INCHES/MILLIMETERS), the custom size units are changed.**

(3) PAPER TYPE

Function	• Sets the default media type.
Use	• To set the default media type.
Setting /procedure	• The default setting is PLAIN PAPER. "PLAIN PAPER"/RECYCLED/THICK 1/THICK 2/THICK 3/LABEL/TRANSPARENCY/ ENVELOPE/POSTCARD/THIN PAPER **NOTE** **• THICK 3 and THIN PAPER are selectable only on the pagepro 5650EN.**

B. PAPER SIZE ERROR

Function Use	• To select whether to detect a paper size error or not. ENABLE : Paper size error is detected. DISABLE : No paper size error is detected.
Setting /procedure	• The default setting is ENABLE. "ENABLE" DISABLE

C. UNIT OF MEASURE

Function	• Sets the measurement units for custom size mode. • Sets the measurement units for SYS DEFAULT MENU/DEFAULT PAPER/CUSTOM SIZE mode.
Use	• To change media measurement units.
Setting /procedure	<For North America> • The default setting is INCHES. <For other destinations> • The default setting is MILLIMETERS. INCHES MILLIMETERS

9.8.4 STARTUP OPTIONS

A. DO STARTUP PAGE

Function	• Sets whether a startup page is printed at startup of the printer.
Use	• To specify whether a startup page is printed. ON : Start up page is printed at startup the printer. OFF : Start up page is not printed at startup of the printer.
Setting /procedure	• The default setting is OFF. ON "OFF"

9.8.5 AUTO CONTINUE

Function	• Select whether or not printing continues if the size or type of media in the selected tray is different from the size or type of media for the print job.
Use	• If AUTO CONTINUE is set to ON, printing automatically continues after about 10 seconds under the following conditions. At this time, printing will be performed even if the media size is different. No media: PAPER EMPTY/TRAY EMPTY Different media size/type: PAPER ERROR/TRAY x PAPER ERR ON : Auto continuous printing is ON. OFF : Auto continuous printing is OFF.
Setting /procedure	• The default setting is OFF. ON "OFF"

9.8.6 HOLD JOB TIMEOUT

Function	• Sets the amount of time before a job saved temporarily in the printer is automatically deleted.
Use	• To change the amount of time a job is held before being deleted.
Setting /procedure	• The default setting is DISABLE (No auto delete.). "DISABLE" 1 hour 4 hours 1 day 1 week **NOTE** **• This menu is available only when an optional hard disk kit is installed.**

9.8.7 ENERGY SAVER TIME

Function	• Sets the amount of time before the machine enters energy saver mode after the last print is received or the last key operated.
Use	• To change the amount of time before the machine enters energy saver mode.
Setting /procedure	• The default setting is 5 minutes. 5 minutes/6 minutes/7 minutes/8 minutes/9 minutes/10 minutes/11 minutes/12 minutes/ 13 minutes/14 minutes/15 minutes/30 minutes/1 hour

9.8.8 MENU TIMEOUT

Function	• Sets the amount of time before the control panel returns to the status screen from menu mode and the help display.
Use	• To set the amount of the time before the control panel returns to the status screen from the menu and the help display.
Setting /procedure	• The default setting is 2 minutes. OFF 1 minute “2 minutes”

9.8.9 LCD CONTRAST

Function	• Sets the brightness of the control panel LCD display.
Use	• To set the brightness of the control panel LCD display.
Setting /procedure	The default setting is 0. -3 -2 -1 “0” +1 +2 +3

9.8.10 SECURITY

A. CHANGE PASSWORD

Function	• Sets the password used for the lock panel function.
Use	• To change the password used for the lock panel function. 0000 : Panel lock function is OFF. 0001 to FFFF : Valid password for panel lock function.
Setting /procedure	*1.* Select [CHANGE PASSWORD] and press the Menu/Select key. *2.* Set desired password (first digit) with the up key△/down key▽ and press the right key▷. *3.* Repeat the above procedures to set up to fourth digit password. • The default setting is 0000. “0000” to FFFF **NOTE** • **Make sure to set the password to something other than “0000” when the [LOCK PANEL] function is set to [ON].** • **If you forget the password, it can be initiated (0000) with [SERVICE MENU/ RESTORE PASSWORD].** See P.145

B. LOCK PANEL

Function	• Protects the menu (except the service menu) with a password.
Use	• To make the menu (except the service menu) impossible to change unless the correct password is entered. OFF : Panel lock function is OFF. MINIMUM : Panel lock function is ON. Protect the operation of [INTERFACE MENU], [SYS DEFAULT MENU]. ON : Panel lock function is ON. Protect the operation of [PROF/PRINT MENU], [PRINT MENU], [PAPER MENU], [QUALITY MENU], [INTERFACE MENU], [SYS DEFAULT MENU] and [MEMORY DIRECT].
Setting /procedure	• The default setting is “OFF.” “OFF” MINIMUM ON

9.8.11 CLOCK

A. DATE

Function	• Sets the date of the printer’s built-in clock.
Use	• To change the date of the printer’s built-in clock.
Setting /procedure	DATE (DD.MM.YY): For Europe DATE (MM.DD.YY): For North America DATE(YY.MM.DD): For Japan, Asia, China The following shows how to set DATE (DD.MM.YY). *1.* Select [CLOCK] and press the Menu/Select key. *2.* Select [DATE (DD.MM.YY)] and press the Menu/Select key. *3.* Set date with the up key△/down key▽ and press the right key▷. *4.* Repeat the above procedures to set month and year. *5.* Press the Menu/Select key. DD : 01 to 31 MM : 01 to 12 YY : 2007 to 2032

B. TIME

Function	• Sets the time of the printer’s built-in clock.
Use	• To change the time of the printer’s built-in clock.
Setting /procedure	*1.* Select [CLOCK] and press the Menu/Select key. *2.* Select [TIME] and press the Menu/Select key. *3.* Set hour with the up key△/down key▽ and press the right key▷. *4.* Repeat the above procedures to set minute. *5.* Press the Menu/Select key.

C. TIME ZONE

Function Use	• Sets the time zone.
Setting /procedure	*1.* Select [CLOCK] and press the Menu/Select key. *2.* Select [TIME ZONE] and press the Menu/Select key. *3.* Set time zone with the up key△/down key▽. *4.* Press the Menu/Select key.

9.8.12 HDD FORMAT

Function	• Initializes the format of the optional hard disk kit.
Use	• To initialize the format of the optional hard disk kit. USER AREA ONLY : Initialize only user area ALL : Initialize all area
Setting /procedure	*1.* Select [HDD FORMAT] and press the Menu/Select key. *2.* Select desired initialization method and press the Menu/Select key. *3.* [ARE YOU SURE?] is displayed. *4.* By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. *5.* The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. • The default setting is USER AREA ONLY. USER AREA ONLY ALL **NOTE** • **This menu is available only when an optional hard disk kit is installed.**

9.8.13 CARD FORMAT

Function	• Initializes the format of the optional compact flash card.
Use	• To initialize the format of the optional compact flash card. USER AREA ONLY : Initialize only user area ALL : Initialize all area
Setting /procedure	*1.* Select [CARD FORMAT] and press the Menu/Select key. *2.* Select desired initialization method and press the Menu/Select key. *3.* [ARE YOU SURE?] is displayed. *4.* By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. *5.* The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. • The default setting is USER AREA ONLY. USER AREA ONLY ALL **NOTE** • **This menu is available only when an optional compact flash card is installed.**

9.8.14 RESTORE DEFAULTS

Function	• Restores the factory default of each setting.
Use	• To restore the defaults of all settings. RESTORE NETWORK : Restore the default for [INTERFACE MENU/ETHERNET] setting. RESTORE PRINTER : Restore the default for [PAPER MENU], [QUALITY MENU], [SYS DEFAULT MENU] and [MEMORY DIRECT] setting. RESTORE ALL : Restore defaults for all settings.
Setting /procedure	*1.* Select [RESTORE DEFFAULTS] and press the Menu/Select key. *2.* Select desired mode and press the Menu/Select key. *3.* [ARE YOU SURE?] is displayed. *4.* By pressing the Menu/Select key, initialization starts. By pressing the Cancel key without pressing the Menu/Select key, the start of initialization can be cancelled. *5.* The printer restarts and the hard disk is initialized. Once the initialization starts, it cannot be cancelled. • The default setting is RESTORE NETWORK. RESTORE NETWORK RESTORE PRINTER RESTORE ALL

List of reset items 1

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
PAPER MENU	PAPER SOURCE	DEFAULT TRAY		—	Reset	Reset	TRAY1	P.98
		TRAY 1 to 4	PAPER SIZE	—	Reset	Reset	LETTER/A4	P.99
			CUSTOM SIZE	—	Reset	Reset	WIDTH: 8.5inches LENGTH: 11inches	P.99
				—	Reset	Reset	WIDTH:210mm LENGTH:297mm	
			PAPER TYPE	—	Reset	Reset	PLAIN PAPER	P.100
			SIZE SETTING	—	Reset	Reset	AUTO	P.100
		TRAY CHAINING		—	Reset	Reset	ON	P.104
		TRAY MAPPING MODE		—	Reset	Reset	OFF	P.103
		DUPLEX		—	Reset	Reset	OFF	P.104
		COPIES		—	Reset	Reset	1	P.104
		COLLATE		—	Reset	Reset	OFF	P.104
		FINISHING		—	Reset	Reset	MAIN TRAY	P.105
		JOB SEPARATION		—	Reset	Reset	OFF	P.105

List of reset items 2

Item			Reset Item			Initial Value	Ref. Page
			RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
QUALITY MENU	RESOLUTION		—	Reset	Reset	600	P.105
	BRIGHTNESS		—	Reset	Reset	0 %	P.105
	HALFTONE	IMAGE PRINTING	—	Reset	Reset	DETAIL	P.106
		TEXT PRINTING	—	Reset	Reset	LINE ART	P.106
		GRAPHICS PRINTING	—	Reset	Reset	DETAIL	P.106
	ECONOMY PRINT		—	Reset	Reset	OFF	P.107

List of reset items 3

Item		Reset Item			Initial Value	Ref. Page
		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
MEMORY DIRECT	TYPE OF FILES	—	Reset	Reset	PDF,XPS	P.107

List of reset items 4

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
INTER-FACE MENU	JOB TIMEOUT			—	Reset	Reset	15 seconds	P.108
	ETHER-NET-TCP/IP	ENABLE		Reset	—	Reset	YES	P.108
		IP ADDRESS		Reset	—	Reset	000.000. 000.000	P.108
		SUBNET MASK		Reset	—	Reset	000.000. 000.000	P.109
		DEFAULT GATEWAY		Reset	—	Reset	000.000. 000.000	P.109
		DHCP		Reset	—	Reset	ON	P.109
		BOOTP		Reset	—	Reset	OFF	P.109
		ARP/PING		Reset	—	Reset	OFF	P.110
		HTTP		Reset	—	Reset	YES	P.110
		FTP		Reset	—	Reset	YES	P.110
		TELNET		Reset	—	Reset	ENABLE	P.110
		BONJOUR		Reset	—	Reset	YES	P.110
		DYNAMIC DNS		Reset	—	Reset	NO	P.111
		IPP		Reset	—	Reset	YES	P.111
		RAW PORT	ENABLE	Reset	—	Reset	YES	P.111
			BIDIREC-TIONAL	—	Reset	Reset	OFF	
		SLP		Reset	—	Reset	YES	P.111
		SMTP		Reset	—	Reset	YES	P.111
		SNMP		Reset	—	Reset	YES	P.112

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
INTERFACE MENU	ETHERNET-TCP/IP	WSD PRINT		Reset	—	Reset	YES	P.112
		IP SEC		Reset	—	Reset	NO	P.112
		IP ADDRESS FILTER	ACCESS PERMISSION	Reset	—	Reset	DISABLE	P.112
			ACCESS REFUSE	Reset	—	Reset	DISABLE	
		IPv6	ENABLE	Reset	—	Reset	YES	P.113
			AUTO SETTING	Reset	—	Reset	YES	
	NETWARE			Reset	—	Reset	YES	P.113
	APPLE TALK			Reset	—	Reset	YES	P.113
	SPEED/DUPLEX			Reset	—	Reset	AUTO	P.114
	IEEE802.1X			Reset	—	Reset	NO	P.114
	MEMORY DIRECT			—	Reset	Reset	ENABLE	P.114

List of reset items 5

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
SYS DEFAULT MENU	LANGUAGE			—	Reset	Reset	ENGLISH	P.114
	EMULATION	DEF. EMULATION		—	Reset	Reset	AUTO	P.115
		POST-SCRIPT	WAIT TIMEOUT	—	Reset	Reset	0	P.115
			PS ERROR PAGE	—	Reset	Reset	OFF	
			PS PROTOCOL	—	Reset	Reset	AUTO	
		PCL	CR/LF MAPPING	—	Reset	Reset	CR=CR LF=LF	P.115
			LINES PER PAGE	—	Reset	Reset	60	
			FONT SOURCE/ FONT NUMBER	—	Reset	Reset	0	
			FONT SOURCE/ PITCH SIZE	—	Reset	Reset	10.00	
			FONT SOURCE/ SYMBOL SET	—	Reset	Reset	PC8	
		XPS	DEGITAL SIGNATURE	—	Reset	Reset	DISABLE	P.117
			XPS ERROR PAGE	—	Reset	Reset	ON	

Item				Reset Item			Initial Value	Ref. Page
				RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
SYS DEFAULT MENU	PAPER	DEFAULT PAPER	PAPER SIZE	—	Reset	Reset	LETTER/A4	P.117
			CUSTOM SIZE/ WIDTH	—	Reset	Reset	8.5 inches/ 210 mm	
			CUSTOM SIZE/ LENGTH	—	Reset	Reset	11.00 inches/ 297 mm	
			PAPER TYPE	—	Reset	Reset	PLAIN PAPER	
		PAPER SIZE ERROR		—	Reset	Reset	ENABLE	P.118
		UNIT OF MEASURE		—	Reset	Reset	INCHES/ MILLI-METERS	P.119
	STARTUP OPTIONS	DO STARTUP PAGE		—	Reset	Reset	OFF	P.119
	AUTO CONTINUE			—	Reset	Reset	OFF	P.119
	HOLD JOB TIMEOUT			—	Reset	Reset	DISABLE	P.119
	ENERGY SAVER TIME			—	Reset	Reset	5 minutes	P.120
	MENU TIMEOUT			—	Reset	Reset	2 minutes	P.120
	LCD CONTRAST			—	Reset	Reset	0	P.120
	SECURITY	CHANGE PASSWORD		—	Reset	Reset	0000	P.120
		LOCK PANEL		—	Reset	Reset	OFF	
	ENABLE WARNING	PAPER EMPTY	TRAY 1	—	Reset	Reset	ON	P.128
			TRAY 2	—	Reset	Reset	ON	
			TRAY 3	—	Reset	Reset	ON	
			TRAY 4	—	Reset	Reset	ON	
		PAPER LOW	TRAY 2	—	Reset	Reset	ON	P.129
			TRAY 3	—	Reset	Reset	ON	
			TRAY 4	—	Reset	Reset	ON	
		TONER LOW		—	Reset	Reset	ON	P.129

List of reset items 6

Item		Reset Item			Initial Value	Ref. Page
		RESTORE NETWORK	RESTORE PRINTER	RESTORE ALL		
PageScope Web Connection	Admin Password	—	Reset	Reset	administrator	—
	Contact Name	—	Reset	Reset	KONICA MINOLTA Customer Support	—
	Contact Information	—	Reset	Reset	http://printer.konicaminolta.com/	—
	Contact Utility Link	—	Reset	Reset	http://pagescope.com/	—
	Corporate URL	—	Reset	Reset	http://printer.konicaminolta.com/	—
	Supplies and Accessories	—	Reset	Reset	http://www.q-shop.com/	—
	Product Help URL	—	Reset	Reset	http://printer.konicaminolta.com/	—
	Auto IP	Reset	—	Reset	DHCP	—
	IPP Config Printer Name	Reset	—	Reset	KONICA MINOLTA PP XXXX	—
	IPP Config Printer Location	Reset	—	Reset	Blank	—

*: Destination items. For details, see the page referenced.

**: XXXXXX are the final 6 digits of the printer's MAC address.

9.8.15 ENABLE WARNING

A. PAPER EMPTY

(1) TRAY1

Function	• Specifies whether a [TRAY 1 Paper Empty] is displayed as a normal message when it is empty.
Use	• To specify whether to display a [TRAY 1 Paper Empty] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	• The default setting is ON. OFF “ON”

(2) TRAY2

Function	• Specifies whether a [TRAY 2 Paper Empty] is displayed as a normal message when it is empty.
Use	• To specify whether to display a [PAPER EMPTY] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	• The default setting is ON. OFF “ON”

(3) TRAY3

Function	• Specifies whether a [TRAY 3 Paper Empty] is displayed as a normal message when it is empty.
Use	• To specify whether to display a [PAPER EMPTY] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	• The default setting is ON. OFF “ON”

(4) TRAY4

Function	• Specifies whether a [TRAY 4 Paper Empty] is displayed as a normal message when it is empty.
Use	• To specify whether to display a [PAPER EMPTY] message as a normal message. ON : Paper empty message is displayed on normal message when tray is empty. OFF : Paper empty message is not displayed on normal message when tray is empty.
Setting /procedure	• The default setting is ON. OFF “ON”

B. PAPER LOW

(1) TRAY2

Function	• Select whether or not to display a warning when tray 2 is about to run out of media.
Use	• To specify whether to display a [PAPER LOW] message as a warning message. ON : Paper low message is displayed on warning message when tray is near-empty. OFF : Paper low message is not displayed on warning message when tray is near-empty.
Setting /procedure	• The default setting is ON. OFF “ON”

(2) TRAY3

Function	• Select whether or not to display a warning when tray 3 is about to run out of media.
Use	• To specify whether to display a [PAPER LOW] message as a warning message. ON : Paper low message is displayed on warning message when tray is near-empty. OFF : Paper low message is not displayed on warning message when tray is near-empty.
Setting /procedure	• The default setting is ON. OFF “ON”

(3) TRAY4

Function	• Select whether or not to display a warning when tray 4 is about to run out of media.
Use	• To specify whether to display a [PAPER LOW] message as a warning message. ON : Paper low message is displayed on warning message when tray is near-empty. OFF : Paper low message is not displayed on warning message when tray is near-empty.
Setting /procedure	• The default setting is ON. OFF “ON”

C. TONER LOW

Function	• Specifies whether or not a warning appears when the toner is about to run out.
Use	
Setting /procedure	• The default setting is ON. “ON” OFF

9.9 MAINTENANCE MENU

9.9.1 How to enter the MAINTENANCE MENU

A. Procedure

1. Display [MAINTENANCE MENU] on the menu screen and press the Menu/Select key.
2. [ENTER PASSWORD] message is displayed.
3. Set the first digit of user password with the up key△/down key▽ and press the right key▷.
4. Repeat the above procedures to set up to fourth digit of password.
   (The initial setting for user password is [0000].)
5. Press the Menu/Select key.

B. Exiting

- Press the Cancel key.

9.9.2 PRINT MENU

A. EVENT LOG

Function	• Prints the event log.
Use	• To check the jams/troubles that occurred, and history of replacing the consumables, etc. The items that can be checked are as follows. Paper Jam Error : The number of jams occurred and its history Engine Fatal Error : The history of troubles which caused service call Fuser Unit : The history of replacing the fuser unit Toner Cartridge : The history of replacing the toner cartridge Trouble Counter : Troubles counted at each section
Setting /procedure	1. Select [EVENT LOG] and press the Menu/Select key. 2. Select [PRINT] and press the Menu/Select key.

B. HALFTONE 64

Function	• Prints the halftone pattern with 25 % level.
Use	• To check the unevenness of the density and the pitch.
Setting /procedure	1. Set the A4S or letter S media on the tray. 2. Select [HALFTONE 64] and press the Menu/Select key. 3. Select desired color with the up key△/down key▽ and press the Menu/Select key. 4. Select [PRINT] and press the Menu/Select key.

C. HALFTONE 128

Function	• Prints the halftone pattern with 50 % level.
Use	• To check the unevenness of the density and the pitch.
Setting /procedure	1. Set the A4S or letter S media on the tray. 2. Select [HALFTONE 128] and press the Menu/Select key. 3. Select desired color with the up key△/down key▽ and press the Menu/Select key. 4. Select [PRINT] and press the Menu/Select key.

D. HALFTONE 256

Function	• Prints the halftone pattern with 100 % level.
Use	• To check the unevenness of the density and the pitch.
Setting /procedure	*1.* Set the A4S or letter S media on the tray. *2.* Select [HALFTONE 256] and press the Menu/Select key. *3.* Select desired color with the up key△/down key▽ and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key.

E. GRADATION

Function	• Prints the gradation pattern.
Use	• To check the gradation reproductively.
Setting /procedure	*1.* Set the A4S or letter S media on the tray. *2.* Select [GRADATION] and press the Menu/Select key. *3.* Select [PRINT] and press the Menu/Select key.

9.9.3 ALIGNMENT

A. TOP ADJUSTMENT

Function	• Adjusts the top margin of media for single-sided printing.
Use	• To correct a misaligned print image. TRAY 1 to TRAY 4 : Adjust the head margin of plain paper fed from the tray1 to 4. THICK : Adjust the head margin of thick paper. DUPLEX : Adjust the head margin of duplex print media.
Setting /procedure	*1.* Select [TOP ADJUSTMENT] and press the Menu/Select key. *2.* Select desired tray or media type and press the Menu/Select key. *3.* Select desired adjustment amount with the up key△/down key▽ and press the Menu/Select key. -8 (-4.1 mm) to +7 (+3.6 mm) (1 step: 0.5 mm)

B. LEFT ADJUSTMENT

Function	• Adjusts the left margin of media for single-sided printing.
Use	• To correct a misaligned print image. LEFT ADJ TRAY 1 : Adjust the left margin of media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2 : Adjust the left margin of media fed from tray 2. LEFT ADJ TRAY 3 : Adjust the left margin of media fed from tray 3. LEFT ADJ TRAY 4 : Adjust the left margin of media fed from tray 4. LEFT ADJ DUPLEX : Adjust the left margin of duplex print media.
Setting /procedure	*1.* Select [LEFT ADJUSTMENT] and press the Menu/Select key. *2.* Select desired item and press the Menu/Select key. *3.* Select desired adjustment amount with the up key△/down key▽ and press the Menu/Select key. -8 (-4.1 mm) to +7 (+3.6 mm) (1 step: 0.5 mm)

C. LD POWER

Function	• Adjust the intensity of laser output.
Use	• The greater the value, the higher the laser output intensity.
Setting /procedure	0 to 7

D. VIDEO TIME LAG

Function	• Adjust the video output start point.
Use	• To fine-adjust the print start position of even-numbered lines in the horizontal direction in increments of one dot. • The greater the value, the more the position is on the right side (up to 15 dots rightward).
Setting /procedure	0 to 15

9.9.4 SUPPLIES

A. REPLACE

(1) FUSER UNIT

Function	• Resets the fuser unit counter.
Use	• To use when the fuser unit has been replaced.
Setting /procedure	*1.* Select [MAINTENANCE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT] and select YES. *2.* Press the Menu/Select key and reset the counter.

9.9.5 QUICK SETTING

A. UPDATE SETTING

Function	• To update printer settings according to the printer setting definition file stored in the USB memory device.
Use	• Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	*1.* Set the USB memory device. *2.* Call the MAINTENANCE MENU screen to the display. *3.* Select [QUICK SETTING] → [UPDATE SETTING]. *4.* The "/setup/*.ini" files in the USB memory device appear on the display. **NOTE** **• The directory name (setup) and file extension (*.ini) are fixed. The definition file with any other name or file extension is not recognized.** **• Up to 20 files can be displayed.** *5.* Using the up key △ or down key ▽, select the definition file to be updated and press the Menu/Select key. *6.* Select [EXECUTE] and press the Menu/Select key. *7.* The selected definition file is loaded and the settings are updated. The message "PROCESSING" appears during the updating procedure. *8.* When the updating procedure is completed, the printer gives a message notifying that the procedure is completed. **NOTE** **• The printer is automatically restarted, if an item that calls for a restart of the printer is included in the updated items.**

B. BACKUP SETTING

Function	• To store, as a definition file, the current printer setting information in the USB memory device.
Use	• Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	*1.* Set the USB memory device. *2.* Call the MAINTENANCE MENU screen to the display. *3.* Select [QUICK SETTING] → [BACKUP SETTING]. *4.* Select [EXECUTE] and press the Menu/Select key. *5.* The definition file with a file name of "SETUP**.in" is saved in the "/setup" folder of the USB memory device. The message "PROCESSING" appears while the definition file is being saved. **NOTE** **• Any number from 01 to 20 takes the place of "**" in the file name.** **• Up to 20 definition files can be saved.** **If the USB memory device already contains 20 files, the maximum number of files saved is exceeded and any new file cannot be saved.** *6.* When the saving procedure is completed, the printer gives a message notifying that the procedure is completed.

10. Adjustment item list

Adjustment/setting Items				No	Install lower feeder unit	Install duplex	Replace fuser unit	Replace PH unit	Replace MFP board	RESTORE DEFAULTS	Execute F/W update
		Replacement part/Service job									
MENU	SERVICE MENU	FIRMWARE VERSION	CONTROLLER F/W	1					(2)		❍
			ENGINE F/W	2							
		ALIGNMENT	TOP ADJUSTMENT	3	❍	❍					
			LEFT ADJUSTMENT	4	❍	❍					
			DENSITY ADJ	5							
			LD POWER	6				(1)			
			VIDEO TIME LAG	7				(2)			
		SUPPLIES	FUSER UNIT	8			❍				
Re-entry				9						❍	
F/W update				10					(1)		
Enter the serial number				11					(3)		

* This table shows the adjustment items that are required when a part of the machine has been replaced. Priority order, if applicable, during the adjustment procedures is indicated by the corresponding number.

11. SERVICE MENU

11.1 How to enter the service menu

NOTE

- **Make sure not to reveal the password of the service menu to any unauthorized person.**

A. Procedure 1

1. Display [SERVICE MENU] on the menu screen and press the Menu/Select key.
2. [ENTER PASSWORD] message is displayed.
3. Set first digit of password with the up key△/down key▽ and press the right key▷.
4. Repeat the above procedures to set up to seventh digit of password.
   Enter “KMP5650” or “KMP4650” for service password.

NOTE

- **The service password needs to correspond to the product name.**

5. Press the Menu/Select key.

B. Procedure 2

1. Turn the power switch ON while pressing the up key△ and the Menu/Select key at the power switch OFF.

NOTE

- **Continue to press the up key△ and the Menu/Select key until “INITIALIZING” message appears on the control panel.**

2. When initializing is complete, the service menu appears.

NOTE

- **Password authentication is not required before starting to operate the service menu, however, once the service menu is closed, you need to enter the password to display the service menu again.**

C. Procedure 3

- If a service call message is on the display, perform the following steps, since the ordinary procedure may not be good for entering the service menu.

1. With the service call message on the display, hold down the Menu/Select key for 5 sec. or more.
2. Set first digit of password with the up key△/down key▽ and press the right key▷.
3. Repeat the above procedures to set up to seventh digit of password.
   Enter “KMP5650” or “KMP4650” for service password.

Only the following menu items are, however, available if the service menu is accessed through the above steps.

- SERIAL NUMBER
- FIRMWARE VERSION
- DIAG MODE
- RESTORE PASSWORD
- SOFT SWITCH

D. Exiting

- Press the Cancel key.

11.2 Service menu function tree

SERVICE MENU			Ref. Page
SERIAL NUMBER			P.137
FIRMWARE VERSION	CONTROLLER F/W		P.137
	ENGINE F/W		
	BOOT F/W		
ALIGNMENT	TOP ADJUSTMENT		P.137
	LEFT ADJUSTMENT		P.138
	DENSITY ADJ		P.138
	LD POWER		P.138
	VIDEO TIME LAG		P.138
PRINT MENU	MAINTENANCE INFO		P.139
	EVENT LOG		P.139
	CONFIGURATION PG		P.139
	HALFTONE 64		P.140
	HALFTONE 128		P.140
	HALFTONE 256		P.140
	GRADATION		P.140
DIAG MODE	DIAG EXEC		P.141
SUPLLIES	REPLACE	FUSER UNIT	P.145
RESTORE PASSWORD			P.145
QUICK SETTING *1	UPDATE SETTING		P.146
	BACKUP SETTING		P.146
FIRMWARE UPDATE *1			P.147
SOFT SWITCH	SWITCH 1		P.147
	SWITCH 2		
	SWITCH 3		
	SWITCH 4		

*1: It will be displayed only when a USB memory device is connected.

11.3 SERVICE MENU

11.3.1 SERIAL NUMBER

Function	• Displays the serial number of the printer.
Use	• To confirm the printer's serial number.
Setting /procedure	*1.* Select [SERVICE MENU] and press the Menu/Select key. *2.* Select [SERIAL NUMBER] and press the Menu/Select key. *3.* The serial number of the printer is displayed.

11.3.2 FIRMWARE VERSION

Function	• Displays the version number of the printer firmware.
Use	• To use when the firmware is updated. • To confirm the version number of the printer firmware. CONTROLLER F/W: Firmware of controller ENGINE F/W : Firmware of engine BOOT F/W : Boot firmware
Setting /procedure	*1.* Select [FIRMWARE VERSION] and press the Menu/Select key. *2.* Select desired firmware and press the Menu/Select key. *3.* Version number of firmware is displayed.

11.3.3 ALIGNMENT

A. TOP ADJUSTMENT

Function	• Adjusts the top margin of media for single-sided printing.
Use	• To correct a misaligned print image. TRAY 1 to TRAY 4 : Adjust the head margin of plain paper fed from the tray1 to 4. THICK : Adjust the head margin of thick paper. DUPLEX : Adjust the head margin of duplex print media.
Setting /procedure	*1.* Select [TOP ADJUSTMENT] and press the Menu/Select key. *2.* Select desired tray or media type and press the Menu/Select key. *3.* Select desired adjustment amount with the up key△/down key▽ and press the Menu/Select key. -8 (-4.1 mm) to +7 (+3.6 mm) (1 step: 0.5 mm)

B. LEFT ADJUSTMENT

Function	• Adjusts the left margin of media for single-sided printing.
Use	• To correct a misaligned print image. LEFT ADJ TRAY 1 : Adjust the left margin of media fed from tray 1 (manual tray.) LEFT ADJ TRAY 2 : Adjust the left margin of media fed from tray 2. LEFT ADJ TRAY 3 : Adjust the left margin of media fed from tray 3. LEFT ADJ TRAY 4 : Adjust the left margin of media fed from tray 4. LEFT ADJ DUPLEX : Adjust the left margin of duplex print media.
Setting /procedure	*1.* Select [LEFT ADJUSTMENT] and press the Menu/Select key. *2.* Select desired item and press the Menu/Select key. *3.* Select desired adjustment amount with the up key△/down key▽ and press the Menu/Select key. -8 (-4.1 mm) to +7 (+3.6 mm) (1 step: 0.5 mm)

C. DENSITY ADJ

Functions	• To adjust image density to target reproduction levels.
Use	• An image quality problem is not corrected even after gradation adjust has been run.
Setting/ Procedure	0 to 15

D. LD POWER

Function	• Adjust the intensity of laser output.
Use	• The greater the value, the higher the laser output intensity.
Setting /procedure	0 to 7

E. VIDEO TIME LAG

Function	• Adjust the video output start point.
Use	• To fine-adjust the print start position of even-numbered lines in the horizontal direction in increments of one dot. • The greater the value, the more the position is on the right side (up to 15 dots rightward).
Setting /procedure	0 to 15

11.3.4 PRINT MENU

A. MAINTENANCE INFO

Functions	• To produce an output of a list of setting values, adjustment values, total counter values, and others.
Use	• To check the maintenance information. The items which can be checked are as follows. Device Caution Information Count (total) : Total counter value Coverage (total) : Coverage rate Replace count (total) : Number of times TC and fuser unit have been replaced.
Setting/ Procedure	*1.* Select [MAINTENANCE INFO] and press the Menu/Select key. *2.* Select [PRINT] and press the Menu/Select key.

B. EVENT LOG

Functions	• To print the EVENT LOG.
Use	• To check the jams/troubles which occurred, and the history of replacing the consumables. The items which can be checked are as follows. Paper Jam Error : The number of times jam have occurred and its history Engine Fatal Error : The history of the troubles which required service call Fuser Unit : The history of replacing the fuser unit Toner Cartridge : The history of replacing the toner cartridge Trouble Counter : Trouble counting for each section
Setting/ Procedure	*1.* Select [EVENT LOG] and press the Menu/Select key. *2.* Select [PRINT] and press the Menu/Select key.

C. CONFIGURATION PG

Functions	• Prints the information concerning the configuration.
Use	• To check the adjustment values set by the Maintenance Menu and Service Menu. The items which can be checked are as follows. TOP ADJUSTMENT LEFT ADJUSTMENT DENSITY ADJ LD POWER VIDEO TIME LAG
Setting/ Procedure	*1.* Select [CONFIGURATION PG] and press the Menu/Select key. *2.* Select [PRINT] and press the Menu/Select key.

D. HALF TONE 64

Functions	• Prints the halftone pattern with 25 % level.
Use	• To check the unevenness of the density and the pitch.
Setting/ Procedure	*1.* Set the A4S or letter S media on the tray. *2.* Select [HALF TONE 64] and press the Menu/Select key. *3.* Select desired color with the up key△/down key▽ and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key.

E. HALF TONE 128

Functions	• Prints the halftone pattern with 50 % level.
Use	• To check the unevenness of the density and the pitch.
Setting/ Procedure	*1.* Set the A4S or letter S media on the tray. *2.* Select [HALF TONE 128] and press the Menu/Select key. *3.* Select desired color with the up key△/down key▽ and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key.

F. HALF TONE 256

Functions	• Prints the halftone pattern with 100 % level.
Use	• To check the unevenness of the density and the pitch.
Setting/ Procedure	*1.* Set the A4S or letter S media on the tray. *2.* Select [HALF TONE 256] and press the Menu/Select key. *3.* Select desired color with the up key△/down key▽ and press the Menu/Select key. *4.* Select [PRINT] and press the Menu/Select key.

G. GRADATION

Functions	• Prints the gradation pattern.
Use	• To check the gradation reproductively.
Setting/ Procedure	*1.* Set the A4S or letter S media on the tray. *2.* Select [GRADATION] and press the Menu/Select key. *3.* Select [PRINT] and press the Menu/Select key.

11.4 DIAG MODE

11.4.1 DIAG EXEC

A. Setting procedure

1. Call the service menu to the display.
See P.137
2. Select [DIAG MODE]→[DIAG EXEC].
3. Select the specific DIAG CODE corresponding to the function to be executed from the DIAG function list shown below. Then, press the Menu/Select key.
4. The selected DIAG function is executed.
5. To terminate the DIAG operation, select DIAG CODE “00” and press the Menu/Select key.

NOTE

- **Energizing a motor or a clutch when there is a media misfeed in the machine will apply load on the drive system, resulting in a failure.**

⚠ CAUTION
⚠ • **When an output test under high voltage is to be performed, never touch live parts.** • **Never touch the drive unit, if it is to be operated.** • **While performing testing on the PH unit, use utmost care to prevent your eyes from being directly exposed to the laser beam.**

B. DIAG function list

<table>
<tr><th>DIAG CODE</th><th>Title</th><th>Description</th></tr>
<tr><td>00</td><td>Stop all tests</td><td>Brings all DIAG operations under the DIAG MODE to a stop.</td></tr>
<tr><td>01</td><td>Sensor/switch check</td><td>• The reactions of the sensors/switches fitted in the main body or options can be displayed.
• When a change in a sensor/switch is detected, the numerical value of the DIAG STATUS counts up. If counting up to 15, the value goes back to 0 and then the value again counts up.
• A sensor/switch is faulty if the DIAG STATUS is not count up.

<Detectable sensors/switches/status>

<table>
<tr><td rowspan="12">Main body</td><td>Tray1 media empty sensor</td></tr>
<tr><td>Tray2 media empty sensor (PS3)</td></tr>
<tr><td>Tray2 near empty sensor (PS4)</td></tr>
<tr><td>Registration sensor (PS1)</td></tr>
<tr><td>Exit sensor</td></tr>
<tr><td>Media full sensor (PS7)</td></tr>
<tr><td>Face up sensor (PS6)</td></tr>
<tr><td>Upper cover switch (SW3)</td></tr>
<tr><td>Rear cover switch (SW2)</td></tr>
<tr><td>No toner cartridge</td></tr>
<tr><td>No toner</td></tr>
<tr><td rowspan="2">Lower feeder unit</td><td>Media empty sensor (PS1)</td></tr>
<tr><td>Media near empty sensor</td></tr>
<tr><td rowspan="2">Duplex</td><td>Transport sensor (PS1)</td></tr>
<tr><td>Duplex cover switch</td></tr>
<tr><td rowspan="3">Offset tray</td><td>Offset tray exit sensor (PS1)</td></tr>
<tr><td>Media full sensor on the offset tray control board (OTCB)</td></tr>
<tr><td>Offset tray rear cover switch (SW1)</td></tr>
</table>
</td></tr>
<tr><td>02</td><td rowspan="3">Fusing temperature check</td><td rowspan="3">Not used.</td></tr>
<tr><td>03</td></tr>
<tr><td>04</td></tr>
<tr><td>05</td><td rowspan="4">Firmware version</td><td rowspan="4">Not used.</td></tr>
<tr><td>06</td></tr>
<tr><td>07</td></tr>
<tr><td>08</td></tr>
<tr><td>09</td><td rowspan="4">ROM check sum</td><td rowspan="4">Not used.</td></tr>
<tr><td>0A</td></tr>
<tr><td>0B</td></tr>
<tr><td>0C</td></tr>
<tr><td>10</td><td>Main motor test</td><td>Energizes the main motor.</td></tr>
<tr><td>11</td><td>Exit motor, clockwise test</td><td>Energizes the exit motor for forward rotation.</td></tr>
</table>

DIAG CODE	Title	Description
12	Exit motor, counterclockwise, high speed test	Energizes the exit motor for backward rotation at high speed.
13	Exit motor, counterclockwise, low speed test	Energizes the exit motor for backward rotation at low speed.
14	Duplex transport motor, clockwise, high speed test	Energizes the transport motor of the duplex for forward rotation at high speed.
15	Duplex transport motor, clockwise, normal speed test	Energizes the transport motor of the duplex for forward rotation at ordinary speed.
16	Tray 1 media feed clutch test	Energizes the tray 1 media feed clutch for 1 sec.
17	Tray 2 media feed clutch test	Energizes the tray 2 media feed clutch for 1 sec.
18	Tray 3 media feed clutch test	Energizes the tray 3 media feed clutch for 1 sec.
19	Tray 4 media feed clutch test	Energizes the tray 4 media feed clutch for 1 sec.
1A	Fan motor stop	Energizes and deenergizes the fan motor.
1B	Pressure roller bias (-) test	Applies a negative voltage to the fusing pressure roller.
1C	Registration roller clutch test	Energizes the registration roller clutch.
1D	Charge roller AC test	Applies an AC voltage to the charge roller.
1E	Charge roller DC test	Applies a DC voltage to the charge roller.
1F	Developer bias, AC test	Applies an AC voltage as a developing bias to the magnetic roller.
20	Developer bias, DC test	Applies a DC voltage as a developing bias to the magnetic roller.
21	Transfer roller - test	Applies a negative voltage to the transfer roller.
22	Transfer roller + test	Applies a positive voltage to the transfer roller.
23	Charge neutralizing plate test	Applies a voltage to the charge neutralizing plate.
24	Fan motor, high speed test	Rotates the fan motor at high speed.
25	Polygon motor test	Energizes the polygon motor. **NOTE** • **Do not energize the polygon motor for a long time, because energizing the polygon motor affects the cumulative time.**
26	Laser diode test	Turns on the laser diode of the PH unit.
27	Offset tray transport motor test	Operates the transport motor of the offset tray.

DIAG CODE	Title	Description
28	Offset tray offset test	Operates the offset mechanism of the offset tray. • The offset mechanism is operated in the following order: exit centrally → exit offset (to the right) → exit normally (to the left) → exit centrally .. (repeated)
29	Exit tray route change solenoid test	Energizes the exit tray route change solenoid of the offset tray.
2A	Pressure roller bias (+) test	Applies a positive voltage to the fusing pressure roller.
2B	Tray 3 media feed motor test	Energizes the tray 3 media feed motor.
2C	Tray 4 media feed motor test	Energizes the tray 4 media feed motor.
2D	Tray 3 transport clutch test	Energizes the tray 3 transport clutch.
2E	Tray 4 transport clutch test	Energizes the tray 4 transport clutch.
2F *	Main motor, high speed test (Half speed mode)	Energizes the main motor for rotation at high speed (during half-speed control).
30 *	Exit motor, clockwise, normal speed test (Half speed mode)	Energizes the exit motor for forward rotation at ordinary speed (during half-speed control).
31 *	Exit motor, counterclockwise, high speed test (Half speed mode)	Energizes the exit motor for backward rotation at high speed (during half-speed control).
32 *	Exit motor, counterclockwise, normal speed test (Half speed mode)	Energizes the exit motor for backward rotation at ordinary speed (during half-speed control).
33 *	Duplex transport motor, clockwise, high speed test (Half speed mode)	Energizes the transport motor of the duplex for forward rotation at high speed (during half-speed control).
34 *	Duplex transport motor, clockwise, normal speed test (Half speed mode)	Energizes the transport motor of the duplex for forward rotation at ordinary speed (during half-speed control).
35 *	Tray 3 media feed motor test (Half speed mode)	Energizes the tray 3 media feed motor (during half-speed control).
36 *	Tray 4 media feed motor test (Half speed mode)	Energizes the tray 4 media feed motor (during half-speed control).
37 *	Offset tray transport motor test (Half speed mode)	Energizes the transport motor of the offset tray (during half-speed control).

*: pagepro 5650EN only

11.5 SUPPLIES

11.5.1 REPLACE

A. FUSER UNIT

Function	• Resets the fuser unit counter.
Use	• To use when the fuser unit has been replaced.
Setting /procedure	*1.* Call the service menu to the screen. *2.* Select [SERVICE MENU] → [SUPPLIES] → [REPLACE] → [FUSER UNIT], and select “YES.” *3.* Press the Menu/Select key and reset the counter.

11.6 RESTORE PASSWARD

Function	• Reinitializes the user password used for the “INTERFACE MENU / SYSTEM DEFAULT MENU / MAINTENANCE MENU” set by user.
Use	• To reinitialize the user password when the menu cannot be opened even when entering the correct password. • To reinitialize the user password when the user forgets the password. YES : Initialize password NO : Not initialize password
Setting /procedure	*1.* Select “RESTORE PASSWORD” and press the Menu/Select key. *2.* Select “YES” and press the Menu/Select key. *3.* Return the password set at “INTERFACE MENU / SYSTEM DEFAULT MENU / MAINTENANCE MENU” to “0000.” • The default setting is NO. YES “NO”

11.7 QUICK SETTING

11.7.1 UPDATE SETTING

Function	• To update printer settings according to the printer setting definition file stored in the USB memory device.
Use	• Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	*1.* Set the USB memory device. *2.* Call the SERVICE MENU screen to the display. *3.* Select [QUICK SETTING] → [UPDATE SETTING]. *4.* The "/setup/*.ini" files in the USB memory device appear on the display. **NOTE** **• The directory name (setup) and file extension (*.ini) are fixed. The definition file with any other name or file extension is not recognized.** **• Up to 20 files can be displayed.** *5.* Using the up key △ or down key ▽, select the definition file to be updated and press the Menu/Select key. *6.* Select [EXECUTE] and press the Menu/Select key. *7.* The selected definition file is loaded and the settings are updated. The message "PROCESSING" appears during the updating procedure. *8.* When the updating procedure is completed, the printer gives a message notifying that the procedure is completed. **NOTE** **• The printer is automatically restarted, if an item that calls for a restart of the printer is included in the updated items.**

11.7.2 BACKUP SETTING

Function	• To store, as a definition file, the current printer setting information in the USB memory device.
Use	• Printer definition files are saved according to various setting patterns and a pattern the most appropriate for a specific need can be selected promptly.
Setting /procedure	*1.* Set the USB memory device. *2.* Call the SERVICE MENU screen to the display. *3.* Select [QUICK SETTING] → [BACKUP SETTING]. *4.* Select [EXECUTE] and press the Menu/Select key. *5.* The definition file with a file name of "SETUP**.in" is saved in the "/setup" folder of the USB memory device. The message "PROCESSING" appears while the definition file is being saved. **NOTE** **• Any number from 01 to 20 takes the place of "**" in the file name.** **• Up to 20 definition files can be saved.** **If the USB memory device already contains 20 files, the maximum number of files saved is exceeded and any new file cannot be saved.** *6.* When the saving procedure is completed, the printer gives a message notifying that the procedure is completed.

11.8 FIRMWARE UPDATE

A. VIEW INFORMATION

Function	• To display firmware information stored in the USB memory device.
Use	• The following information is displayed: Model name (pagepro 5650 or pagepro 4650) of firmware data Version information of firmware data
Setting /procedure	*1.* Set the USB memory device. *2.* Call the SERVICE MENU screen to the display. *3.* Select [FIRMWARE UPDATE] and press the Menu/Select key. *4.* Select the specific type of firmware data to be upgraded and press the menu key. *5.* Select [VIEW INFORMATON] and press the Menu/Select key. **NOTE** • **An error message appears if the selected data is not of the appropriate data format.**

B. EXECUTE

Function	• To upgrade firmware by using the USB memory device.
Use	• Use for upgrading firmware.
Setting /procedure	See P.23

11.9 SOFT SWITCH

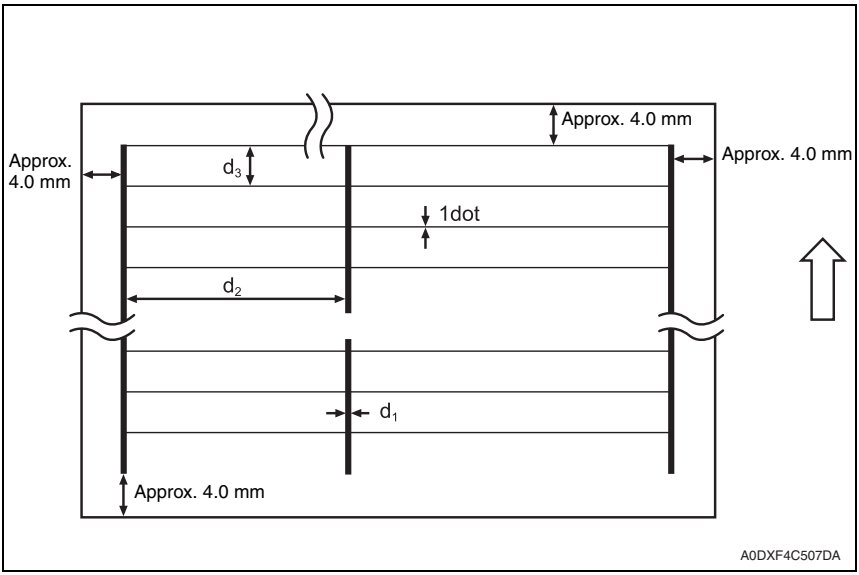
Function	• Not used.
Use	
Setting /procedure	

12. Other functions

12.1 Test pattern print

12.1.1 Outline

- The test pattern print prints the test pattern built into the machine for operation check.
- This test pattern can be produced only through the operation on the engine side.
  It can be useful for identifying the faulty section when an image problem or other malfunction occurs.



Resolution	d_1 (dot)	d_2 (dot) *	d_3 (dot)
600 dpi	Approx. 24	Approx. 2454	127
1,200 dpi	Approx. 48	Approx. 4908	63

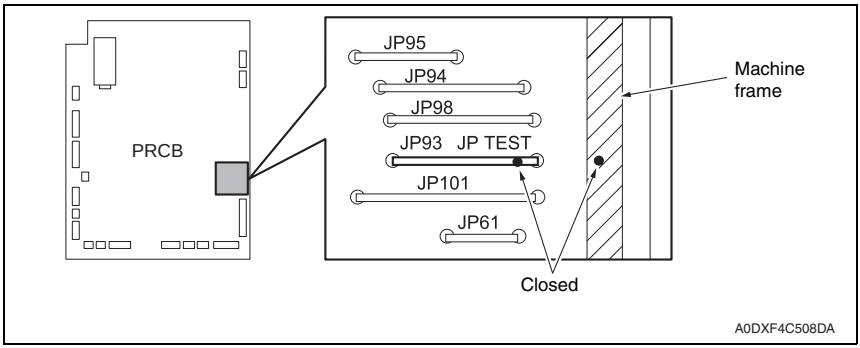
*: The d_2 values are for Letter.

NOTE

- **The longitudinal lines in the test pattern may be rugged for want of jitter control.**

12.1.2 Printing procedure

- The test pattern is printed when a circuit is closed across the test print pin (JP TEST) on the printer control board and the frame.



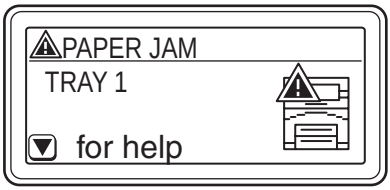
Blank Page

Troubleshooting

13. Jam display

13.1 Misfeed display

- When a media misfeed occurs, a message is displayed on the control panel.



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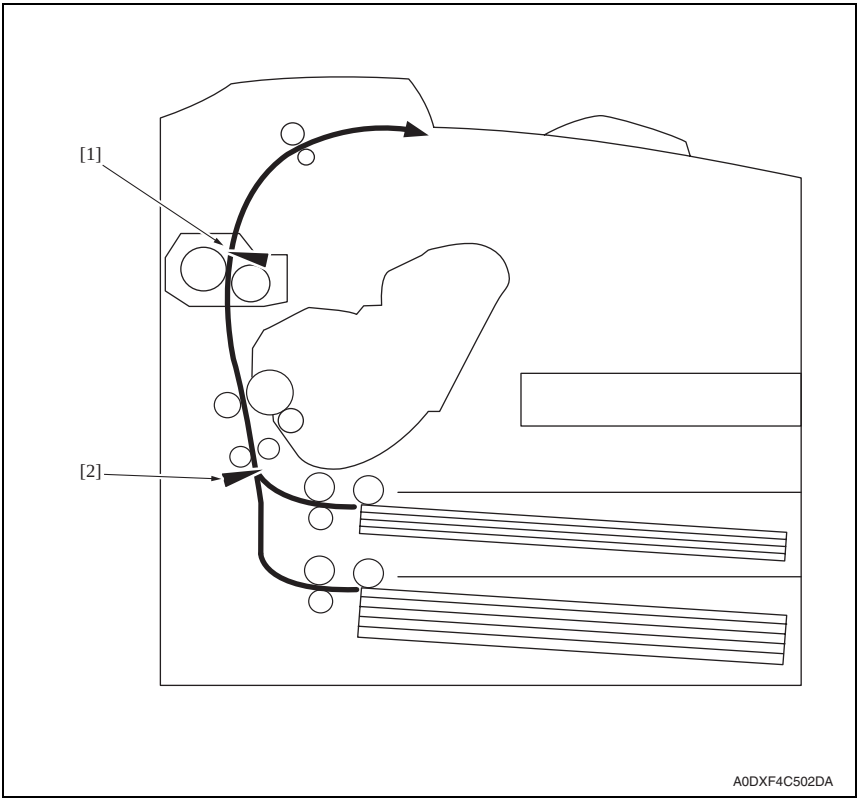
Display		Misfeed location	Misfeed processing location	Action
LCD 1	LCD 2			
PAPER JAM	TRAY1	• Tray 1 media feed	• Tray 1/top cover	P.154
	TRAY2	• Tray 2 media feed	• Tray 2/top cover	P.155
	TRAY3	See P.15 of the lower feeder unit service manual.		
	TRAY4			
	TRANSFER	• Transfer section	• Top cover	P.156
	FUSER/EXIT	• Fusing/exit section	• Rear cover/fuser unit	P.157
	DUPLEX1	See P.13 of the duplex service manual.		
	DUPLEX2			
	SUB EXIT	See P.13 of the offset tray service manual.		

13.2 Misfeed display resetting procedure

- Open the relevant cover, clear the sheet of misfed media, and close the cover.

13.3 Sensor layout



[1] Exit sensor

[2] Registration sensor (PS1)

13.4 Solution

13.4.1 Initial check items

- When a media misfeed occurs, first make checks of the following initial check items.

Check item	Action
Does media meet product specifications?	• Change media.
Is media curled, wavy, or damp.	• Change media. • Instruct user in correct media storage.
Is a foreign matter present along the media path, or is the media path deformed or worn?	• Clean or change the media path.
Are the media separator fingers dirty, deformed, or worn?	• Clean or change the defective media separator finger.
Are rolls/rollers dirty, deformed, or worn?	• Clean or change the defective roll/roller.
Are the edge guide and trailing edge stop at correct position to accommodate the media?	• Set as necessary.
Are actuators found operational as checked for correct operation?	• Correct or change the defective actuator.

13.4.2 Misfeed at tray1 media feed section

A. Detection timing

Type	Description
Detection of tray 1 media feed section	• The media blocks the registration sensor at a timing earlier than the predetermined time after it has been taken up from tray 1. • The distance between sheets of media is shorter than the specified value during media feed from tray 1. • Media longer than Legal is used (one of media size errors).

B. Action

Relevant electrical parts	
Main motor (M1) Tray 1 media feed clutch (CL1) Registration roller clutch (CL3) Registration sensor (PS1)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS1 sensor check	PRCB P/J24-11 (ON)	P.193
3	CL1 operation check	PRCB P/J24-13 (ON)	P.193
4	CL3 operation check	PRCB P/J24-15 (ON)	P.193
5	M1 operation check	DCPU P/J43-5 (ON)	P.188
6	Change PRCB	—	—

13.4.3 Misfeed at tray 2 media feed section

A. Detection timing

Type	Description
Detection of misfeed at tray 2 media feed section	• The media does not reach the registration sensor within the predetermined period of time after it has been taken up from tray 2.

B. Action

Relevant electrical parts	
Main motor (M1) Tray 2 media feed clutch (CL2) Registration roller clutch (CL3) Registration sensor (PS1)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS1 sensor check	PRCB P/J24-11 (ON)	P.193
3	CL2 operation check	PRCB P/J24-5 (ON)	P.193
4	CL3 operation check	PRCB P/J24-15 (ON)	P.193
5	M1 operation check	DCPU P/J43-5 (ON)	P.188
6	Change PRCB	—	—

13.4.4 Misfeed at transfer section

A. Detection timing

Type	Description
Detection of misfeed at transfer section	• The media does not reach the exit sensor even after the lapse of the predetermined period of time after it has blocked the registration sensor.
Detection of media left in transfer section	• The registration sensor is blocked during a warm-up cycle.

B. Action

Relevant electrical parts	
Main motor (M1) Registration roller clutch (CL3) Registration sensor (PS1)	Fuser unit Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS1 sensor check	PRCB P/J24-11 (ON)	P.193
3	CL3 operation check	PRCB P/J24-15 (ON)	P.193
4	M1 operation check	DCPU P/J43-5 (ON)	P.188
5	Change fuser unit	—	—
6	Change PRCB	—	—

13.4.5 Misfeed at fusing/exit section

A. Detection timing

Type	Description
Detection of misfeed at fusing/exit section	• The media does not block the exit sensor even after the lapse of the predetermined period of time after it has been taken up. • The media does not block the exit sensor even after the lapse of the predetermined period of time after it has unblocked the registration sensor. • The media unblocks the exit sensor at a timing earlier than the predetermined time.
Detection of media left in fusing/exit section	• The exit sensor is blocked during a warm-up cycle.

B. Action

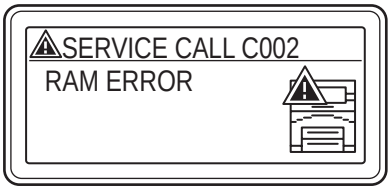
Relevant electrical parts	
Main motor (M1) Exit motor Registration roller clutch (CL3) Registration sensor (PS1)	Fuser unit Exit motor drive board Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Initial check items	—	—
2	PS1 sensor check	PRCB P/J24-11 (ON)	P.193
3	CL3 operation check	PRCB P/J24-15 (ON)	P.193
4	M1 operation check	DCPU P/J43-5 (ON)	P.188
5	Exit motor operation check	Exit motor drive board P/J103-2 to 5	P.188
6	Check the exit motor drive board connector for proper connection and correct as necessary.	—	—
7	Change fuser unit.	—	—
8	Change PRCB	—	—

14. Malfunction code

14.1 Trouble codes (service call)

- The printer's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding trouble code on the control panel.



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14.1.1 Trouble code list

- For the details of the malfunction codes of the options, see the service manual for the corresponding option.

LCD1 (service call ID)	LCD2/LCD3 (error description)	Item	Detection timing
0017	MAIN MOTOR	Main motor malfunction	• The speed of the main motor (M1) does not reach the predetermined value.
0046	FUSER FAN	Fusing cooling fan motor malfunction	• The fusing cooling fan motor (FM1) develops a rotation failure or other malfunction.
0300	POLYGON MOTOR	Polygon motor malfunction	• The interval of the /BD signal is retarded relative to the predetermined value after the polygon motor has started rotating. • The interval of the /BD signal is retarded relative to the predetermined value after it has reached the predetermined value. • The laser beam output does not reach the predetermined value.
0500	FUSER ERROR	Heating roller warm-up failure	• The fusing temperature does not reach the predetermined value after the lapse of the predetermined period of time. • The heater lamp remains ON for 10 sec. or more in the standby state. • The fusing temperature is 125 °C or less during a print cycle. • The fusing temperature is 220 °C or more. • An open-circuited thermistor is detected.
13E3	FLASH DEVICE	Flash ROM device fault	• An erase error occurs during erasing of data in flash ROM.
C002	RAM ERROR	RAM error at startup (standard memory)	• RAM error at standard memory is detected during printer start-up.
C003	RAM ERROR	RAM error at startup (expanded memory)	• RAM error at expanded memory is detected during printer start-up.
C013	H/W ADDRESS	MAC address error at startup	• Invalid MAC address is detected during printer start-up.

LCD1 (service call ID)	LCD2/LCD3 (error description)	Item	Detection timing
C015	BOOT ROM	Boot ROM error at startup	• Boot ROM error is detected during printer start-up.
C025	CONTROL-LER ROM	Controller ROM error (Configuration information error)	• Lead error of destination setting file is detected during the printer starting.
C026		Controller ROM error (Access error)	• Flash ROM access error is detected during the printer starting.
C027		Controller ROM error (Data error)	• Final check sum error is detected during the printer starting.
C050	HDD ERROR	HDD access error	• When correct access to the hard disk kit is failed during access.
C051	HDD DISK FULL	HDD full error	• Range for user space is full during access to the hard disk kit.
C052	CARD ERROR	Compact flash access error	• When correct access to the compact flash card is failed during access.
C053	CARD FULL	Compact flash full error	• Range for user space is full during access to the compact flash card.
C054	CARD ERROR	Compact flash disconnected	• Compact flash is disconnected
C060	UPDATE ERROR	Firmware update error	• Firmware update fails to complete correctly during update.
C071	H/W CON-FIG ERROR	Hardware configuration error	• An error occurs with hardware configuration (video clock etc.).
FFFF	I/F COMM ERROR	Interface Communication error	• Correct communication is failed when receiving/ sending the command between MFPB and PRCB.

14.2 Resetting a malfunction

- To reset a malfunction, turn the power switch OFF and then ON again.

14.3 Solution

14.3.1 0017: Main motor malfunction

Relevant electrical parts	
Main motor	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the M1 connector for proper connection and correct as necessary.	—	—
2	Check M1 for proper drive coupling and correct as necessary.	—	—
3	Check the PRCB connector for proper connection and correct as necessary.	—	—
4	M1 operation check	DCPU P/J43-5 (ON)	P.188
5	Change M1	—	—
6	Change PRCB	—	—

14.3.2 0046: Fusing cooling fan motor malfunction

Relevant electrical parts	
Fusing cooling fan motor (FM1)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the FM1 connector for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	FM1 operation check	PRCB P/J24-16 (ALARM)	P.193
4	Change FM1	—	—
5	Change PRCB	—	—

14.3.3 0300: Polygon motor malfunction

Relevant electrical parts	
PH unit	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the cable and connector for proper connection and correct as necessary.	—	—
2	Change PH unit	—	—
3	Change PRCB	—	—

14.3.4 0500: Heating roller warm-up failure

Relevant electrical parts	
Fuser unit DC power supply (DCPU)	Print control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the fuser unit for correct installation (whether it is secured in position).	—	—
2	Check the fuser unit, DCPU, and PRCB for proper connection and correct as necessary.	—	—
3	Change fuser unit	—	—
4	Change PRCB	—	—
5	Change DCPU	—	—

14.3.5 13E3: Flash ROM device fault

Relevant electrical parts	
Print control board (PRCB)	MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Check the MFPB for proper connection and correct as necessary.	—	—
2	Change PRCB	—	—
3	Change MFPB	—	—

14.3.6 C002: RAM error at startup (standard memory)

14.3.7 C003: RAM error at startup (expanded memory)

Relevant electrical parts	
MFP board (MFPB)	DIMM (standard/option)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check connection state of the standard/ expanded memory and correct as necessary.	—	—
3	Check the MFPB connector for proper connection and correct as necessary.	—	—
4	Change the standard/expanded DIMM.	—	—
5	Change MFPB	—	—

14.3.8 C013: MAC address error at startup

14.3.9 C015: BOOT ROM error at startup

Relevant electrical parts
MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check the MFPB connector for proper connection and correct as necessary.	—	—
3	Change MFPB	—	—

14.3.10 C025: Controller ROM error (Configuration information error)

14.3.11 C026: Controller ROM error (Access error)

14.3.12 C027: Controller ROM error (Data error)

Relevant electrical parts
MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check the MFPB connector for proper connection and correct as necessary.	—	—
3	If this error message is displayed after update of firmware, conduct the firmware update procedures again.	—	—
4	Change MFPB	—	—

14.3.13 C050: HDD access error

Relevant electrical parts	
MFP board (MFPB)	Hard disk kit (HDD)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check the HDD connector for proper connection and correct as necessary.	—	—
3	Check the MFPB connector for proper connection and correct as necessary.	—	—
4	Change HDD	—	—
5	Change MFPB	—	—

14.3.14 C051: HDD full error

Relevant electrical parts	
MFP board (MFPB)	Hard disk kit (HDD)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Delete the job hold in “PROOF/PRINT MENU” to increase the available range for user space.	—	—
3	Check the HDD connector for proper connection and correct as necessary.	—	—
4	Change HDD	—	—

14.3.15 C052: Compact flash access error

Relevant electrical parts	
MFP board (MFPB)	Compact flash card

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check the compact flash for proper connection and correct as necessary.	—	—
3	Check the MFPB connector for proper connection and correct as necessary.	—	—
4	Change compact flash	—	—
5	Change MFPB	—	—

14.3.16 C053: Compact flash full error

Relevant electrical parts	
MFP board (MFPB)	Compact flash card

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Delete the job hold in “PROOF/PRINT MENU” to increase the available range for user space.	—	—
3	Check the compact flash for proper connection and correct as necessary.	—	—
4	Change compact flash	—	—

14.3.17 C054: Compact flash disconnected

Relevant electrical parts	
MFP board (MFPB)	Compact flash card

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check the compact flash for proper connection and correct as necessary.	—	—
3	Change compact flash	—	—

14.3.18 C060: Firmware update error

Relevant electrical parts
MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check the cable that has been used for update of the firmware for proper connection and correct as necessary.	—	—
3	Check the firmware update file and if the file is not the correct one, update the firmware again.	—	—
4	Check the firmware update procedure and if the procedure is not correct, update the firmware again.	—	—
5	Update the firmware again.	—	—
6	Check the MFPB connector for proper connection and correct as necessary.	—	—
7	Change MFPB	—	—

14.3.19 C071: Hardware configuration error

Relevant electrical parts
MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check the MFPB connector for proper connection and correct as necessary.	—	—
3	Change MFPB	—	—

14.3.20 FFFF: Interface Communication error

Relevant electrical parts	
Print control board (PRCB)	MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control signal	Location (electrical component)
1	Reboot the main body.	—	—
2	Check the PRCB connector for proper connection and correct as necessary	—	—
3	Check the MFPB connector for proper connection and correct as necessary.	—	—
4	Change MFPB	—	—
5	Change PRCB	—	—

15. Image quality problems

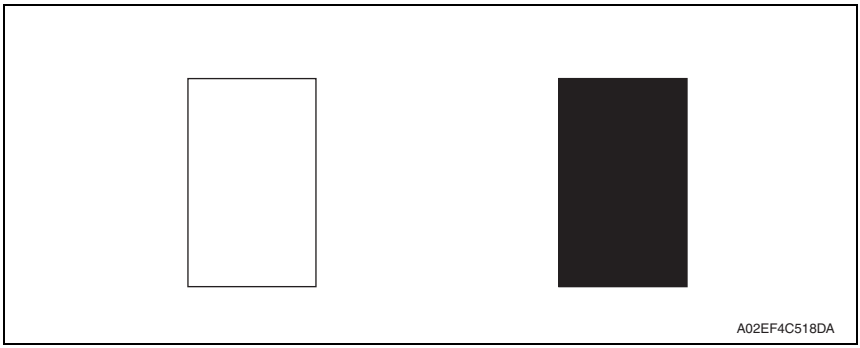
15.1 How to identify problematic part

- Let the machine produce a test print and determine whether the image problem is attributale to the engine or controller system.
See P.148

15.2 Solution

15.2.1 Blank or black prints

A. Typical faulty images

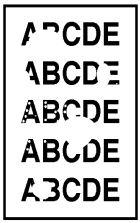


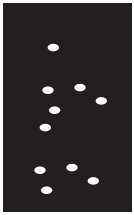
B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Print unit	Is a printed page blank?	YES	Check the PH Unit connectors for proper connection.
2	Toner cartridge	Is the coupling of the drive mechanism of the toner cartridge properly connected?	NO	Check the coupling of the drive mechanism for connection and correct it as necessary, or replace the toner cartridge.
3		Is the drum charge voltage contact point or PC drum ground contact point of the toner cartridge properly connected?	NO	Check, clean, or correct the contact point.
4	Print control board	Is the print control board (PRCB) connector connected properly?	NO	Connect it properly.
5	—	Was the problem eliminated when step 4 was checked?	NO	Replace the print control board (PRCB).
				Replace the MFP board (MFPB).
				Replace the PH unit.

15.2.2 Blank spots

A. Typical faulty images





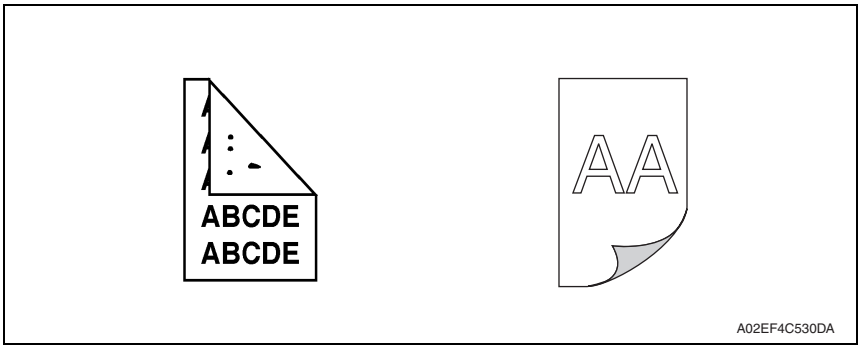
A02EF4C523DA

B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Media	Is the media damp?	YES	Replace the media with media that was just unwrapped.
2	Toner cartridge	Is the PC drum scratched?	YES	Replace the toner cartridge.
3	Media path	Is there foreign matter in the media path?	YES	Remove the foreign matter.
4	Transfer roller	Is the transfer roller dirty or scratched?	YES	Clean or replace the transfer roller.
5	—	Was the problem eliminated when step 4 was checked?	YES	Replace the print control board (PRCB).
				Replace the MFP board (MFPB).

15.2.3 Back marking

A. Typical faulty images



B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Media path	Is there foreign matter in the media path?	YES	Remove the foreign matter.
2	Fuser unit	Is the fusing roller dirty or scratched?	YES	Clean or replace the fuser unit.
3	Transfer roller	Is the transfer roller dirty or scratched?	YES	Clean or replace the transfer roller.

15.2.4 Low image density

A. Typical faulty images

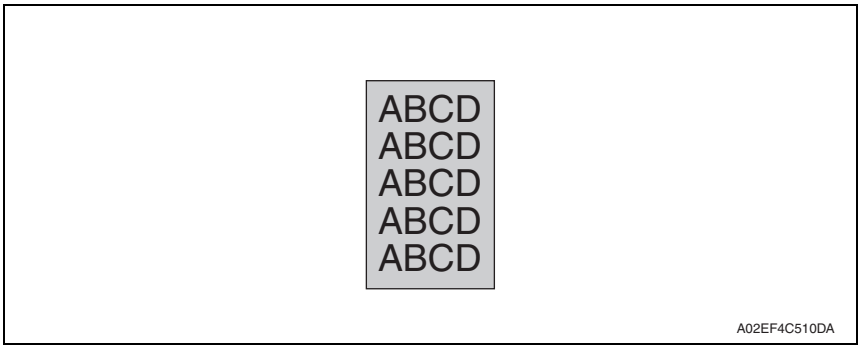
A02EF4C516DA

B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Media	Is the media damp?	YES	Replace the media with media that was just unwrapped.
2	Toner cartridge	Is there toner left in the toner cartridge?	NO	Replace the toner cartridge.
3		Is the PC drum faulty?	YES	
4	Print control board	Is the developing bias faulty?	YES	Replace the print control board (PRCB).
5	Transfer roller	Is the transfer roller faulty?	YES	Replace the transfer roller.
6	—	Was the problem eliminated when step 6 was checked?	YES	Replace the print control board (PRCB).
				Replace the MFP board (MFPB).

15.2.5 Foggy background

A. Typical faulty images

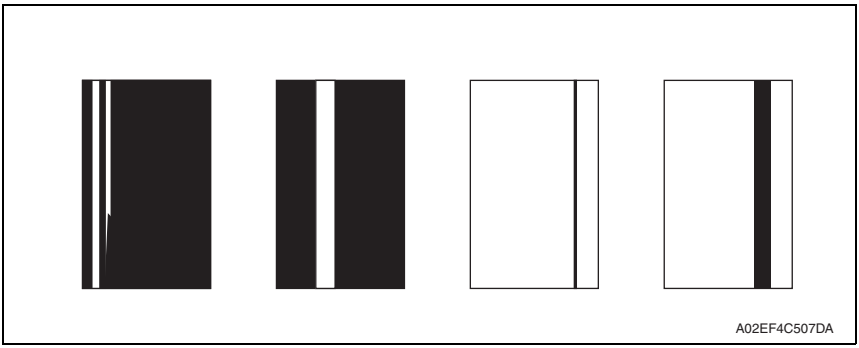


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Toner cartridge	Is the PC drum scratched?	YES	Replace the toner cartridge.
2		Is the developing bias contact terminal in good contact with its mating part?	NO	Clean the contact terminal or check the terminal position.
3	PH unit	Is the PH window dirty?	YES	Clean the PH window.
4	—	Is the problem eliminated after checks have been made through step 3?	YES	Replace the print control board (PRCB).
				Replace the MFP board (MFPB).

15.2.6 White line/bands in sub scan direction
Black line/bands in sub scan direction

A. Typical faulty images

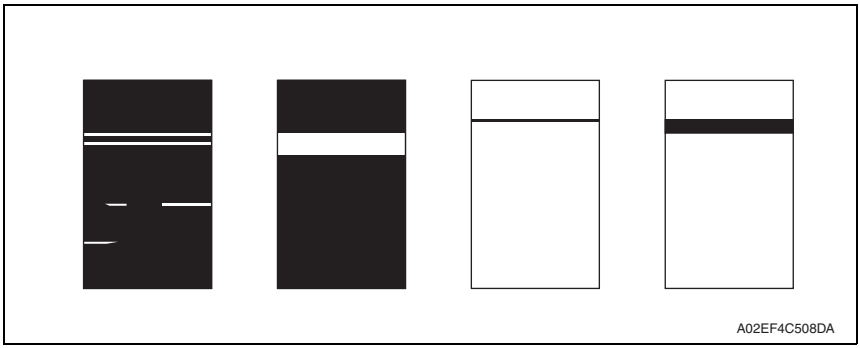


B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Media path	Is the media path dirty with toner?	YES	Clean it.
2	Transfer roller	Is the transfer roller dented, scratched, or dirty?	YES	Replace the transfer roller.
3	Toner cartridge	Is PC drum scratched or dirty?	YES	Replace the toner cartridge.
4	Fuser unit	Is the fusing roller scratched or dirty?	YES	Replace the fuser unit.
5	PH unit	Is the PH window dirty?	YES	Clean the PH window.
6	—	Is the problem eliminated after checks have been made through step 5?	YES	Replace the print control board (PRCB).
				Replace the MFP board (MFPB).

15.2.7 White line/bands in main scan direction
Black line/bands in main scan direction

A. Typical faulty Images



B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Media path	Is the media path dirty with toner?	YES	Clean it.
2		Is there foreign matter in the media path?	YES	Remove the foreign matter.
3	Transfer roller	Is the transfer roller dented, scratched, or dirty?	YES	Replace the transfer roller.
4	Toner cartridge	Is PC drum scratched or dirty?	YES	Replace the toner cartridge.
5	Fuser unit	Is the fusing roller scratched or dirty?	YES	Replace the fuser unit.
6	PH unit	Is the PH window dirty?	YES	Clean the PH window.
7	—	Is the problem eliminated after checks have been made through step 6?	YES	Replace the print control board (PRCB).
				Replace the MFP board (MFPB).

15.2.8 Offset image

A. Typical faulty images

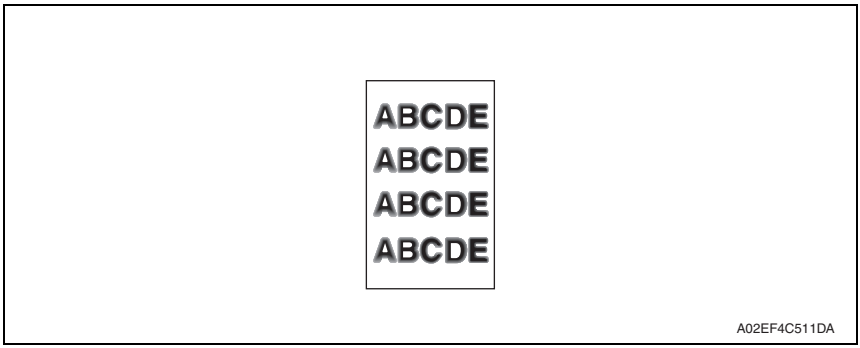
A0DXF4C509DA

B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Fuser unit	Is the fusing roller faulty?	YES	Replace the fuser unit.
2	Transfer roller	Is the transfer roller faulty?	YES	Replace the transfer roller.
3	—	Is the problem eliminated after checks have been made through step 2?	YES	Replace the print control board (PRCB).
				Replace the MFP board (MFPB).

15.2.9 Blurred image

A. Typical faulty images



B. Troubleshooting Procedure

Step	Section	Check item	Result	Action
1	PH unit	Is the surface of the PH window is dirty?	YES	Clean the PH window.
2	Toner cartridge	Is the outside dirty?	YES	Clean.
3		Has the problem been eliminated through the checks of steps up to 2?	NO	Change the toner cartridge

15.2.10 Uneven pitch

A. Typical faulty images

A02EF4C525DA

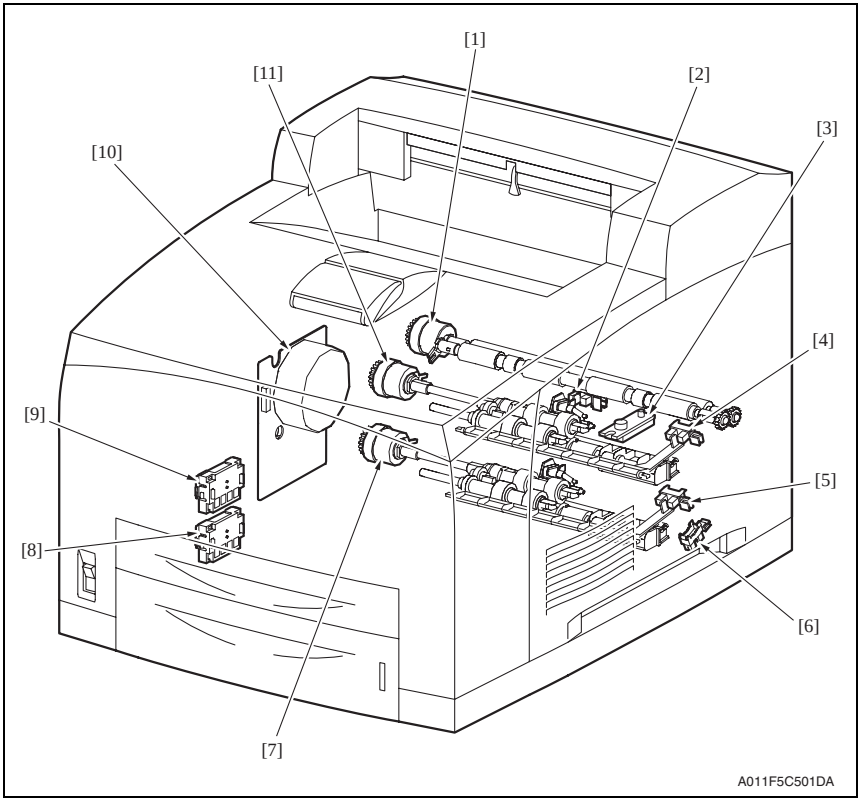
B. Troubleshooting procedure

Step	Section	Check item	Result	Action
1	Toner cartridge	Is the toner cartridge installed in position?	NO	Reinstall.
2	PH unit	Is the PH unit secured in position with the fixing screw?	NO	Secure it in position.
3	Toner cartridge	Is the drive mechanism of the print unit dirty or damaged?	YES	Clean or change the toner cartridge
4		Is the photo conductor dirty, scratched, or worn?	YES	Change the toner cartridge.
5	Transfer roller	Are the transfer roller and drive mechanism dirty, scratched, deformed, or worn?	YES	Change the transfer roller.
6	Fuser unit	Are the rollers and drive mechanism of the fuser unit dirty, scratched, deformed, or worn?	YES	Change the fuser unit.

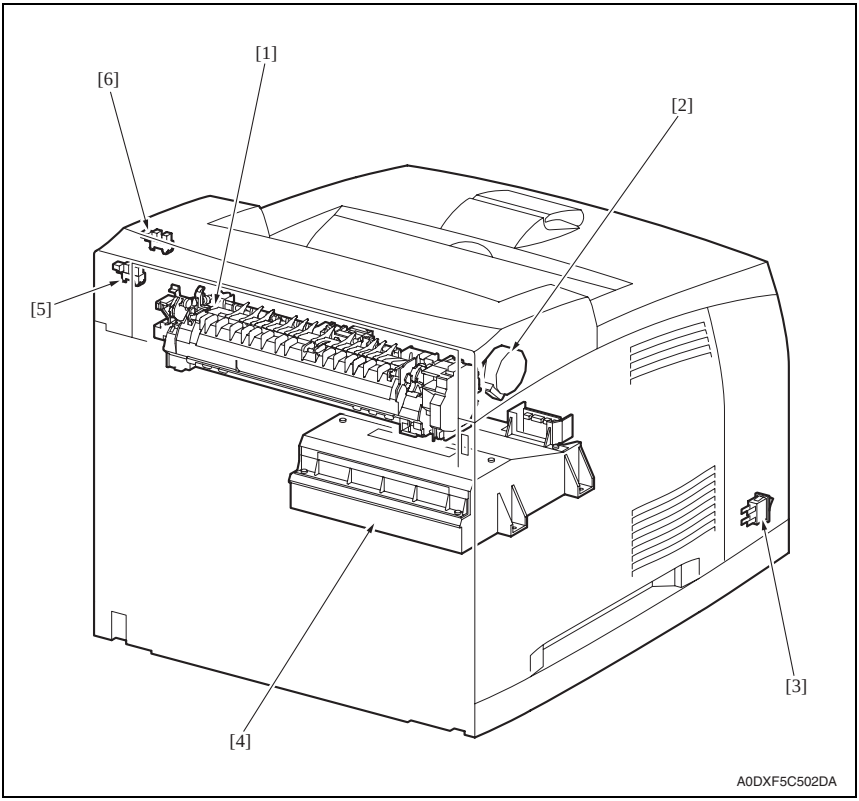
Appendix

16. Parts layout drawing

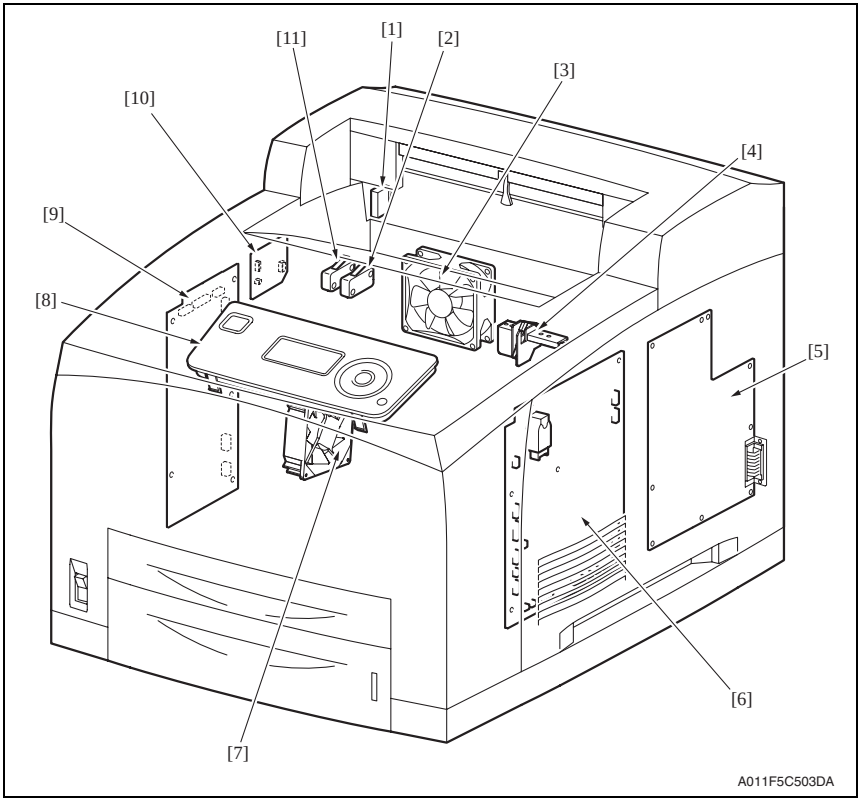
16.1 Main body



[1] Registration roller clutch (CL3)
[2] Registration sensor (PS1)
[3] Toner near empty sensor
[4] Tray1 media empty sensor
[5] Tray2 media empty sensor (PS3)
[6] Tray2 near empty sensor (PS4)
[7] Tray2 media feed clutch (CL2)
[8] Tray2 media size switch
[9] Tray1 media size switch
[10] Main motor (M1)
[11] Tray1 media feed clutch (CL1)



[1] Fuser unit
[2] Exit motor
[3] Main power switch (SW1)
[4] PH unit
[5] Face up sensor (PS6)
[6] Media full sensor (PS7)

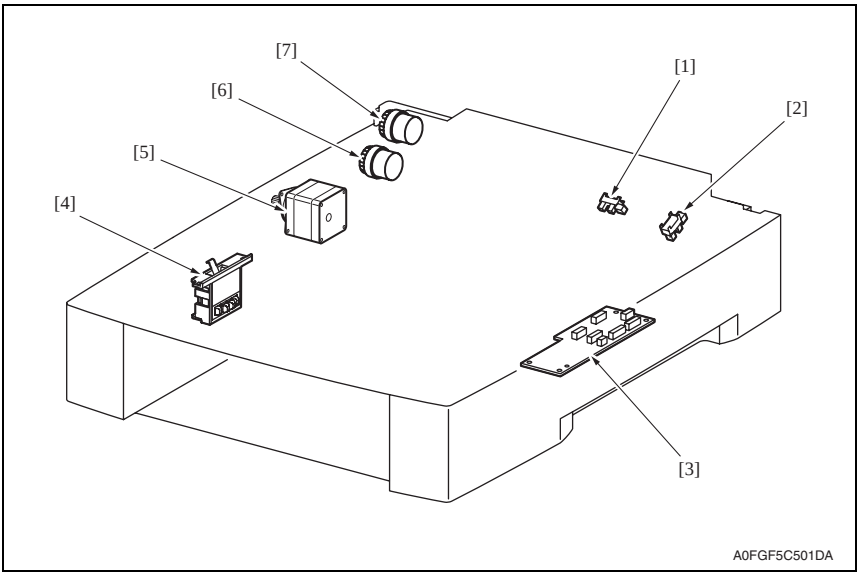


[1] Rear cover switch (SW2)
[2] Interlock switch/24V
[3] Fusing cooling fan motor (FM1)
[4] Upper cover switch (SW3) *1
[5] MFP board (MFPB)
[6] Print control board (PRCB)
[7] Cooling fan motor (FM2)
[8] Operation board
[9] DC power supply (DCPU)
[10] Exit motor drive board
[11] Interlock switch/5V

*1: pagepro 4650EN only

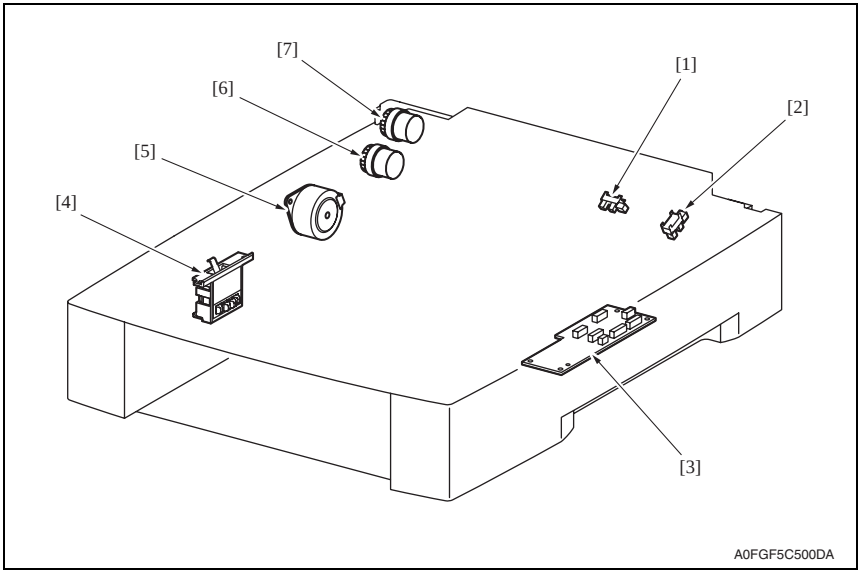
16.2 Lower feeder unit (option)

A. For pagepro 5650EN



[1] Media empty sensor (PS1)
[2] Media near empty sensor
[3] PC control board (PCCB)
[4] Media size switch (SW1)
[5] Media feed motor (M1)
[6] Media feed clutch (CL1)
[7] Transport clutch (CL2)

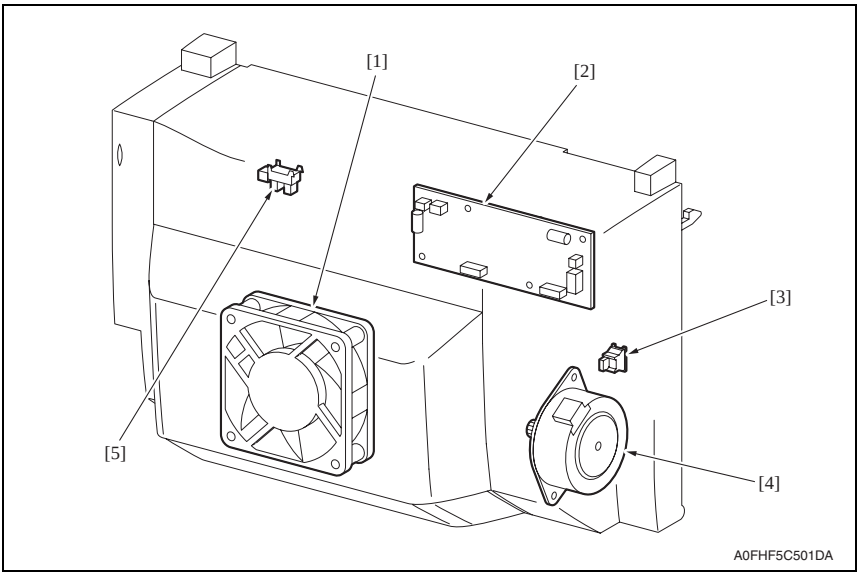
B. For pagepro 4650EN



[1] Media empty sensor (PS1)
[2] Media near empty sensor
[3] PC control board (PCCB)
[4] Media size switch (SW1)
[5] Media feed motor (M1)
[6] Media feed clutch (CL1)
[7] Transport clutch (CL2)

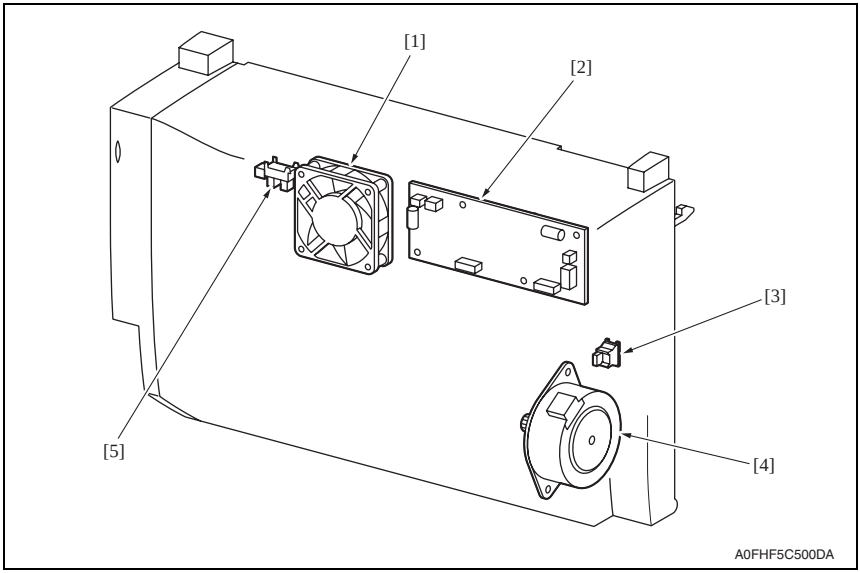
16.3 Duplex (option)

A. For pagepro 5650EN



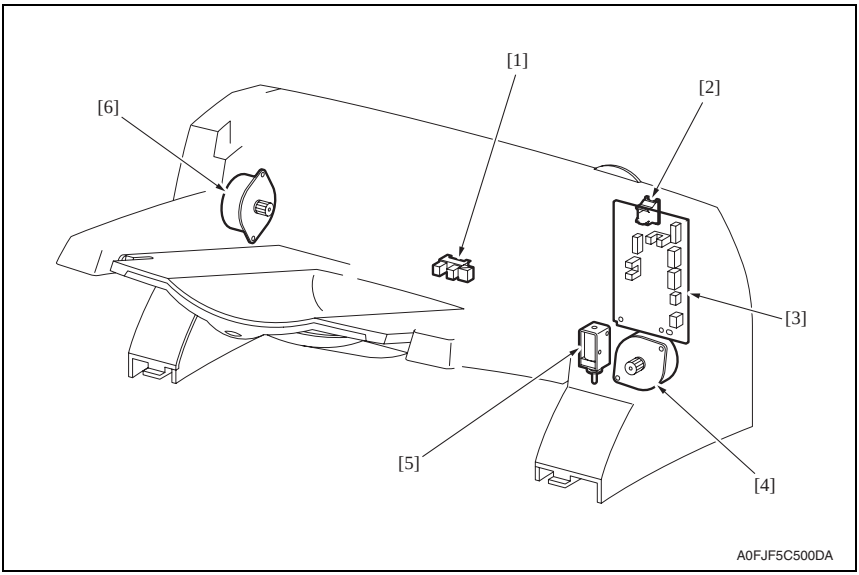
[1] Cooling fan motor (FM1)
[2] AD control board (ADCB)
[3] Duplex cover switch
[4] Transport motor (M1)
[5] Transport sensor (PS1)

B. For pagepro 4650EN



[1] Cooling fan motor (FM1)
[2] AD control board (ADCB)
[3] Duplex cover switch
[4] Transport motor (M1)
[5] Transport sensor (PS1)

16.4 Offset tray (option)



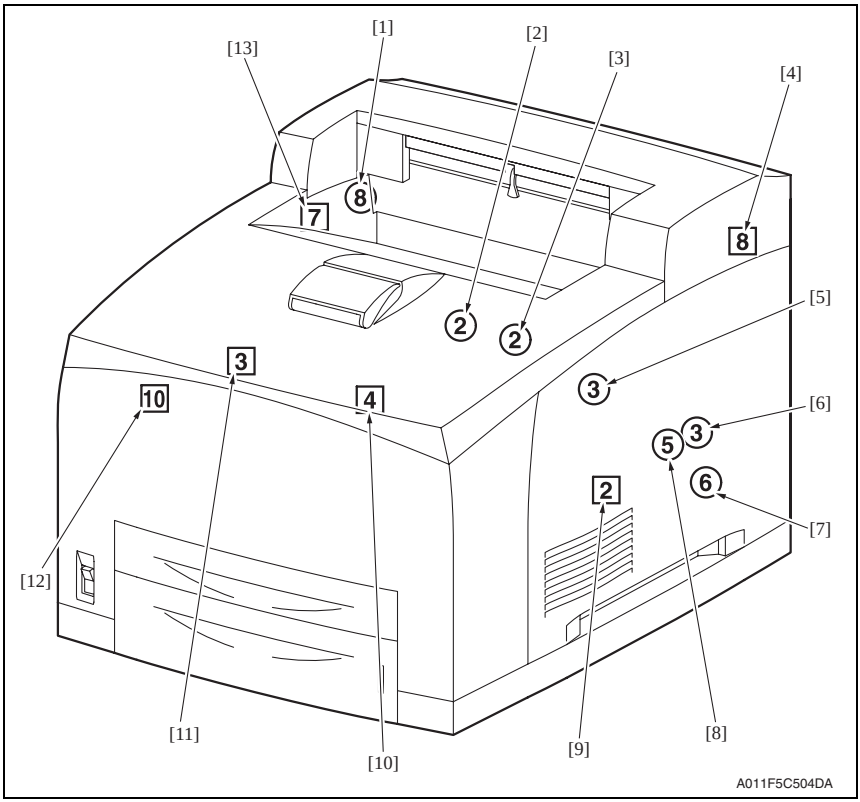
[1] Offset tray exit sensor (PS1)
[2] Offset tray rear cover switch (SW1)
[3] OCT control board (OCTCB)
[4] Shift motor (M2)
[5] Exit tray route change solenoid (SD1)
[6] Transport motor (M1)

17. Connector layout drawing

Description

Number of pin → ① Possible to confirm by removing external cover.

→ [1] Not possible to confirm by removing external cover.



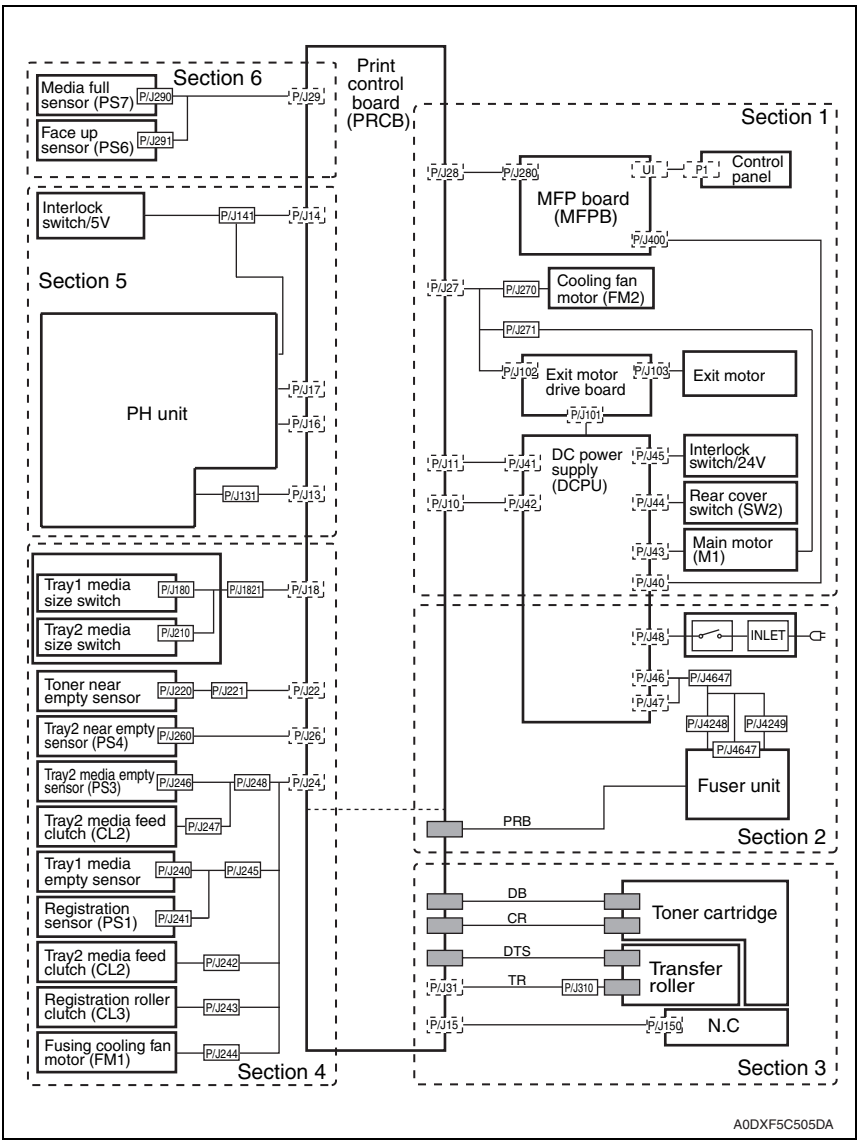
No.	CN No.	Location	No.	CN No.	Location
[1]	P/J2750	P.201	[8]	P/J248	P.193
[2]	P/J242	P.193	[9]	P/J247	P.193
[3]	P/J243	P.193	[10]	P/J131	P.196
[4]	P/J3070	P.202	[11]	P/J270	P.188
[5]	P/J244	P.193	[12]	P/J1821	P.193
[6]	P/J221	P.193	[13]	P/J4647	P.191
[7]	P/J245	P.193			

18. Wiring diagram

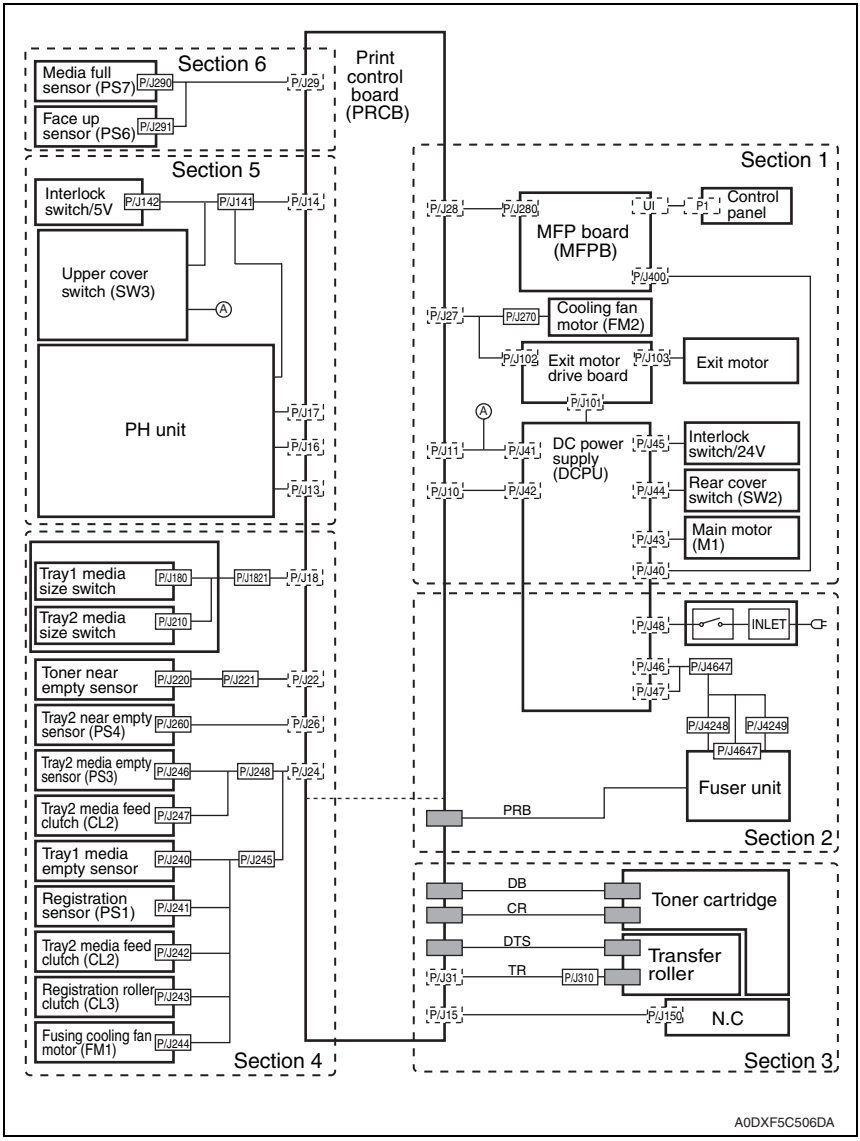
18.1 Main body

18.1.1 Overall wiring diagram

A. pagepro 5650EN

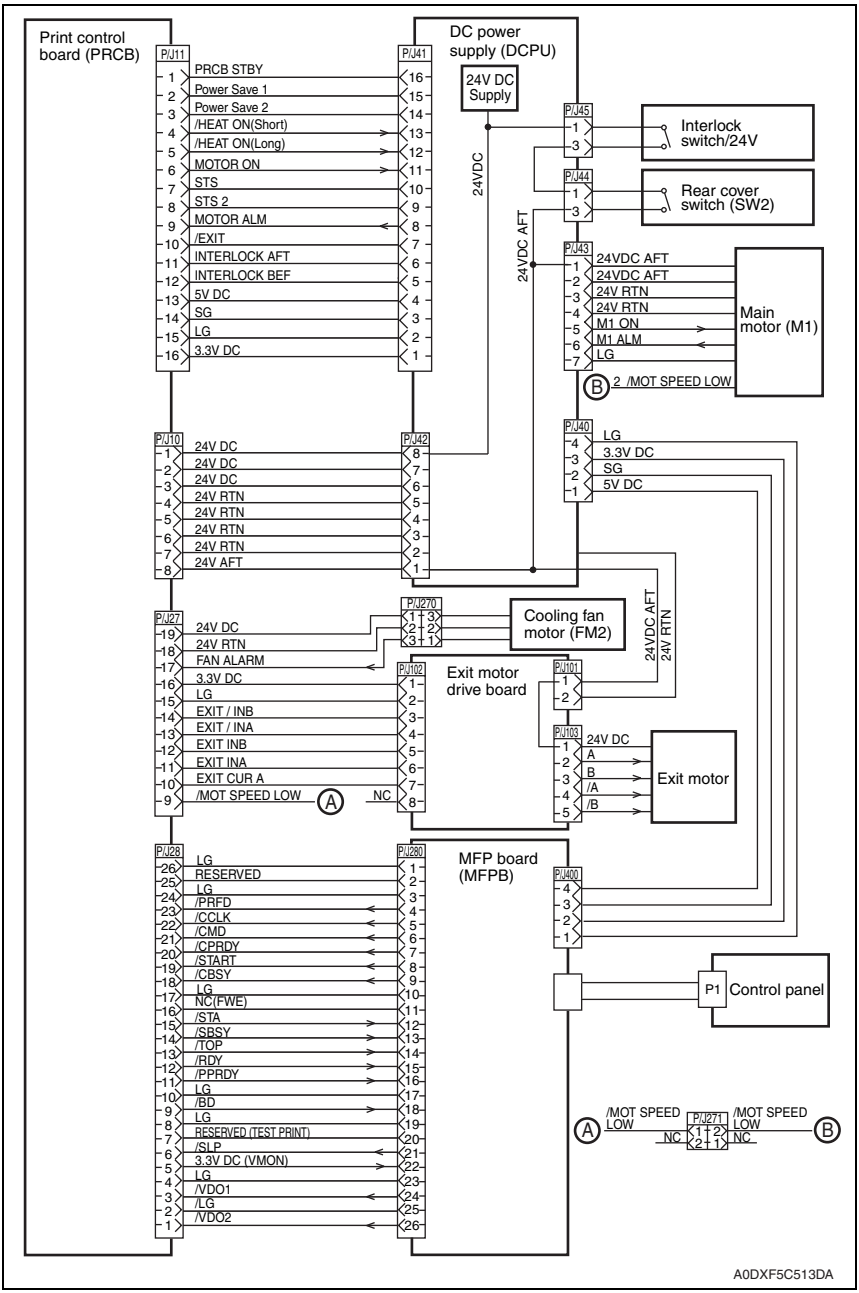


B. pagepro 4650EN

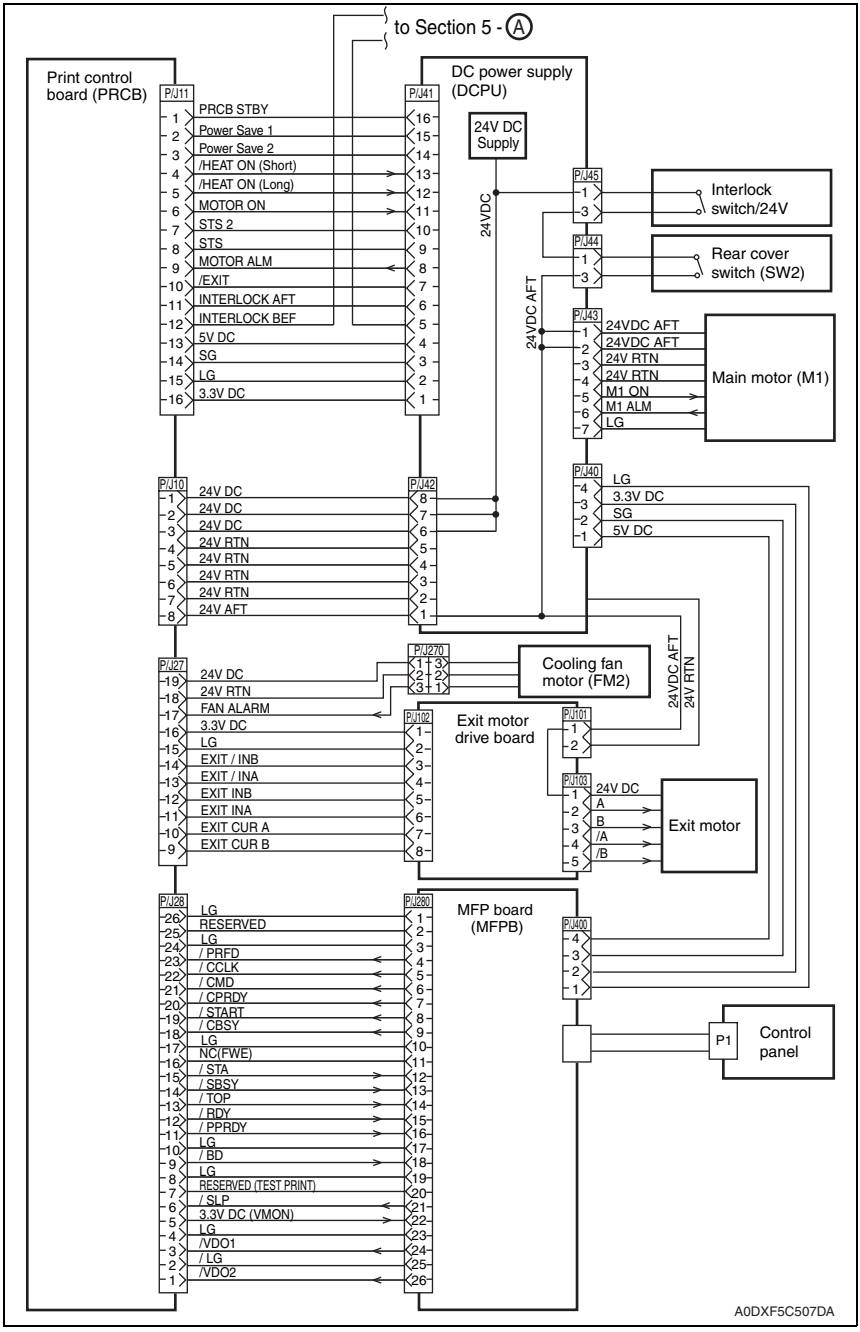


18.1.2 Section 1: Interlock switch/24V, rear cover switch, main motor, cooling fan motor, exit motor

A. pagepro 5650

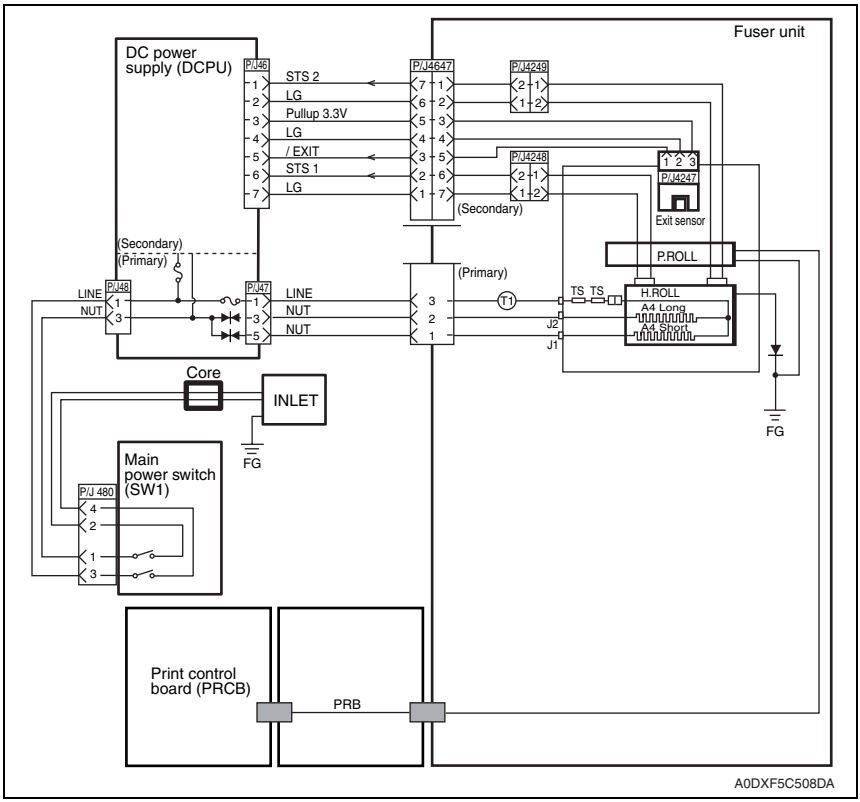


B. pagepro 4650



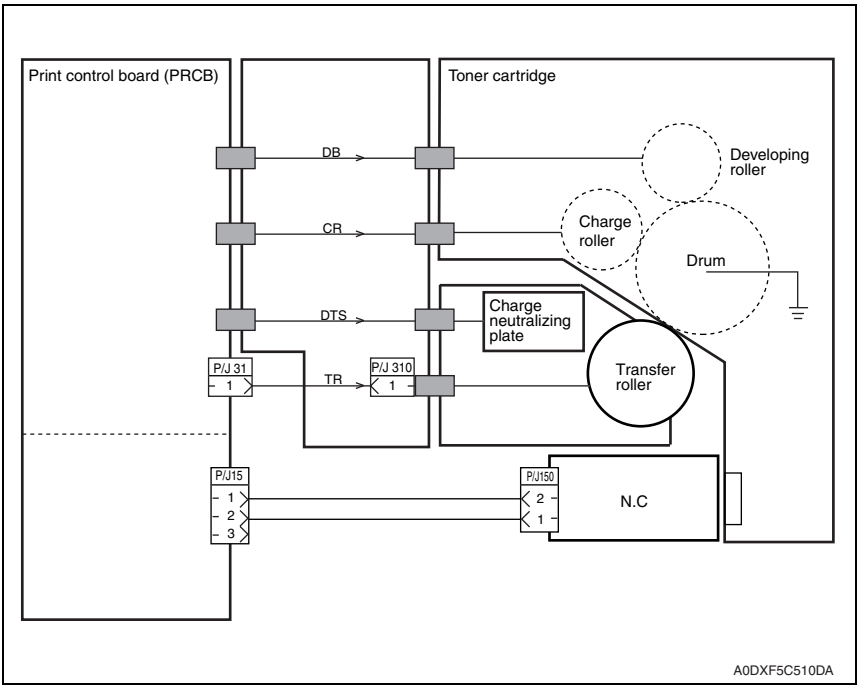
Signal line name	Description
/HEAT ON	AC power-supply control signal for heater rod. Low: ON/High: OFF
M1 ON	Control signal for main motor (M1).
M1 ALM	Monitor signal for main motor (M1).
INTERLOCK AFT	Signal indicating that the rear cover is open. This signal goes High when the front or rear cover is open.
INTERLOCK BEF	Signal indicating that the front cover is open. This signal goes High when the front cover is open.
FAN ALARM	Cooling fan motor (FM2) monitor signal. If a trouble occurs, this signal goes High.
EXIT /INB	Excitation signal for exit motor. Phase /B.
EXIT /INA	Excitation signal for exit motor. Phase /A.
EXIT INB	Excitation signal for exit motor. Phase B.
EXIT INA	Excitation signal for exit motor. Phase A.
EXIT CUR A	Current-switching signal for exit motor.
EXIT CUR B	Current-switching signal for exit motor.
A and B	Current output to each winding of exit motor. Phases A and B.
/A and /B	Current output to each winding of exit motor. Phases $\overline{A}$ and $\overline{B}$.
/PRFD	Prefeed signal. This is effective only when /RDY is Low.
/CCLK	Clock signal. This is sent out simultaneously with /STA or /CMD.
/CMD	Command signal. When /CBSY is Low, it is sent out from the controller in synchronism with /CCLK.
/CPRDY	Ready signal for the controller power supply. This signal goes Low when the controller power supply is ON and, at the same time, initialization of the CPU is completed. When a trouble occurs with the CPU, the signal goes High.
/START	Print start signal. This is effective only when /RDY is Low.
/CBSY	Command busy signal. This goes Low when /CMD is sent out (except when /SBSY is Low or /PPRDY is High).
/STA	Status signal. Status is sent in synchronism with /CCLK when /SBSY is Low.
/SBSY	Status busy signal. This signal is Low when the printer is sending /STA (except when /CBSY is Low or /CPRDY is High).
/TOP	Vertical sync signal for image data. This is periodically sent out when polygon motor is in operation.
/RDY	Ready signal. This signal is Low in a standby state where reception of /START is awaited.
/PPRDY	Ready signal for the printer power supply. This goes Low when the printer power supply is turned on and initialization of the CPU is completed. This signal goes High when the MCP detects an error.
/BD	Horizontal sync signal for image data. This is periodically sent out when polygon motor is in operation.
/SLP	Control signal for LVPS. This goes Low in power saving mode.
/VDO1	Image data signal. This is sent out in synchronism with /TOP and /BD. This signal goes High (White) for other than effective data.
/VDO2	

18.1.3 Section 2: Fuser unit, main power switch



Signal line name	Description
/EXIT	Signal from exit sensor. This signal goes Low when light is received.
STS	Temperature monitor signal (analog signal) from temperature sensor (thermistor). It detects the temperature on the surface of heat roller.
PRB	Output from PRCB which applies a high voltage to pressure roller.

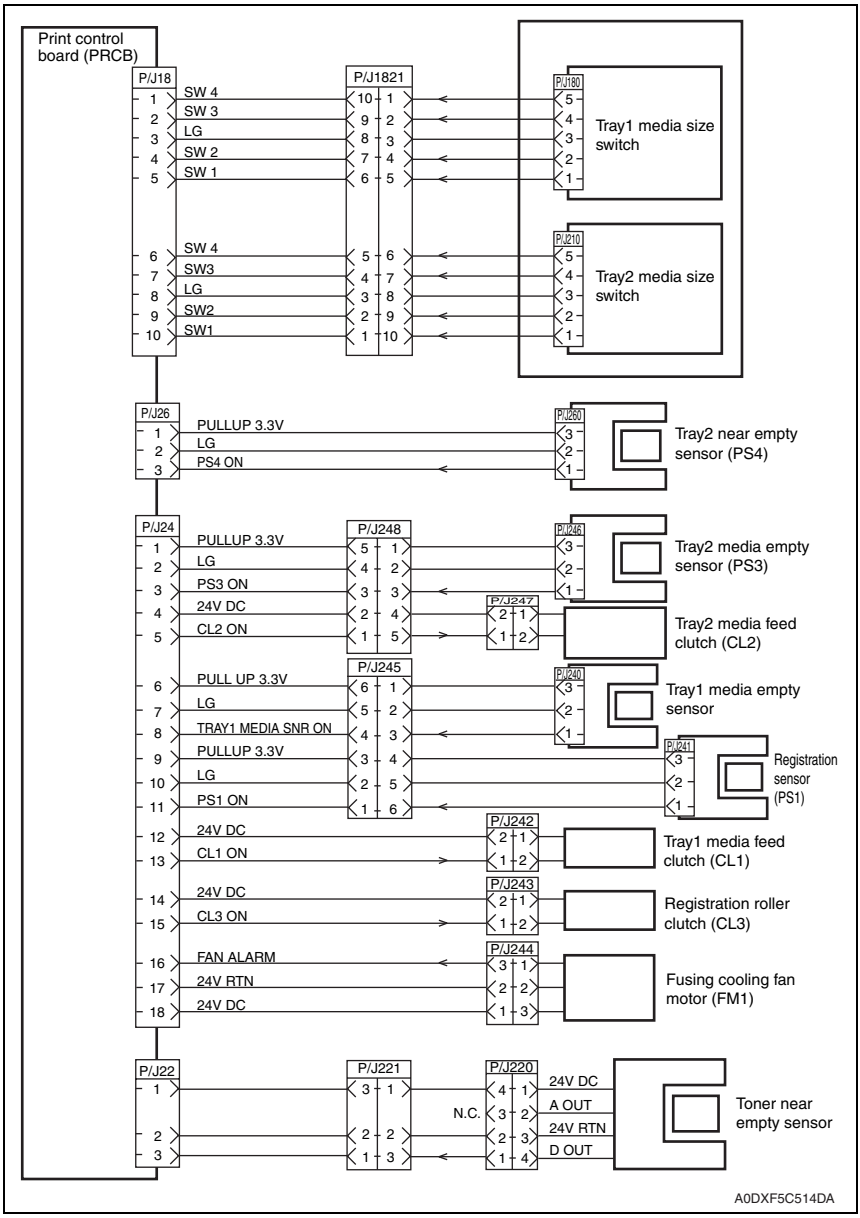
18.1.4 Section 3: Toner cartridge, transfer roller



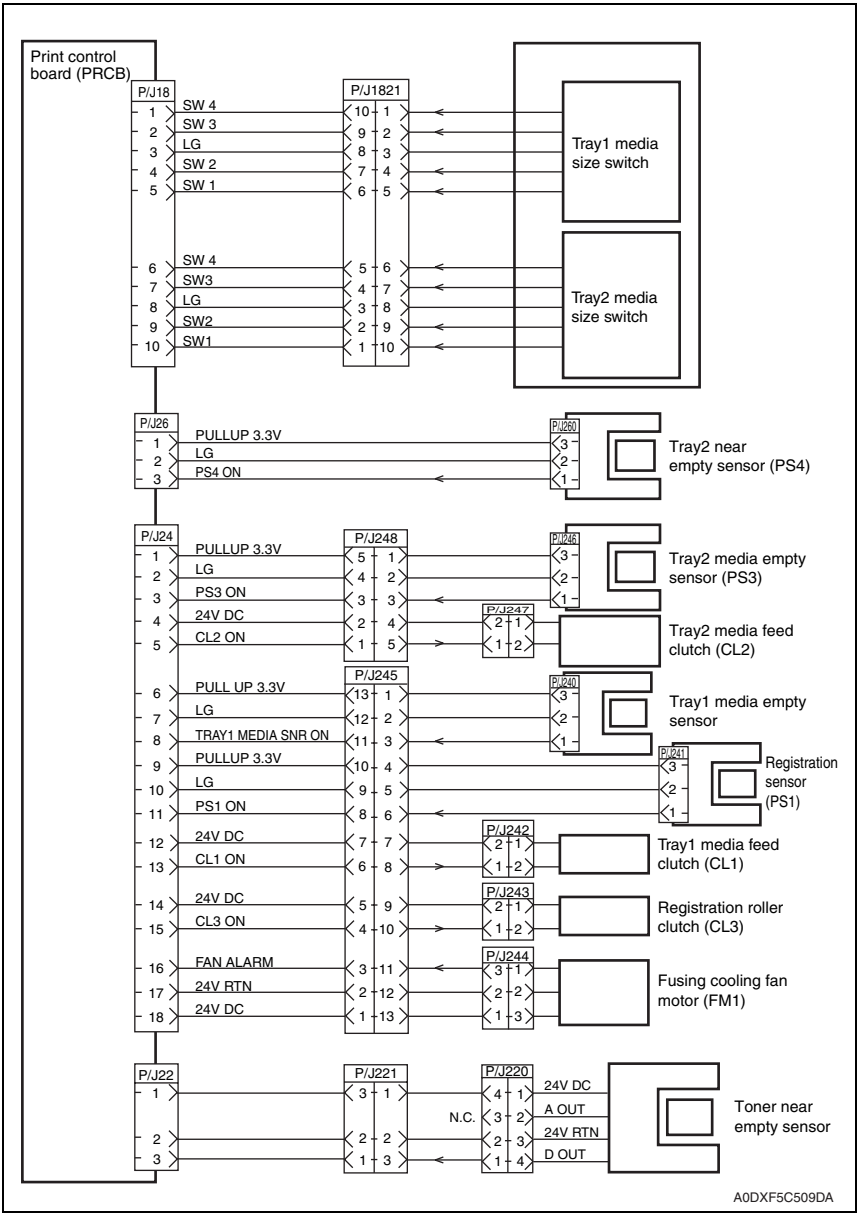
Signal line name	Description
DB	Output from PRCB to developing roller (development bias).
CR	Output from PRCB to charge roller.
DTS	Output from PRCB to charge neutralizing plate.
TR	Output from PRCB to transfer roller.

18.1.5 Section 4: Media feed section, fusing cooling fan motor

A. pagepro 5650EN



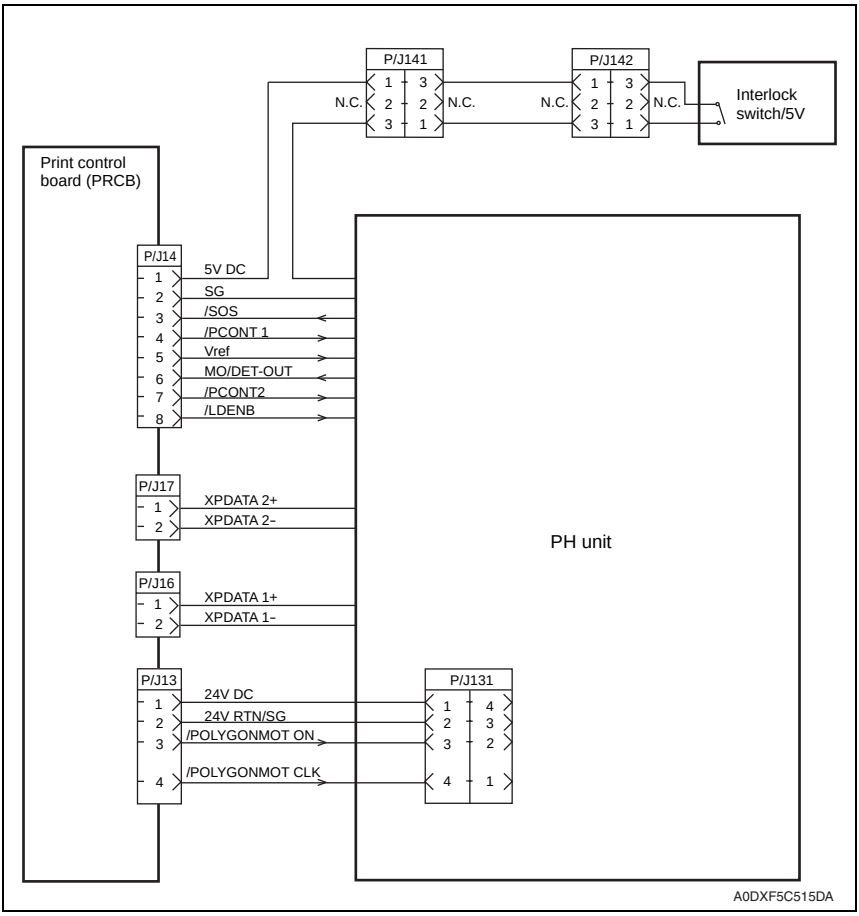
B. pagepro 4650EN



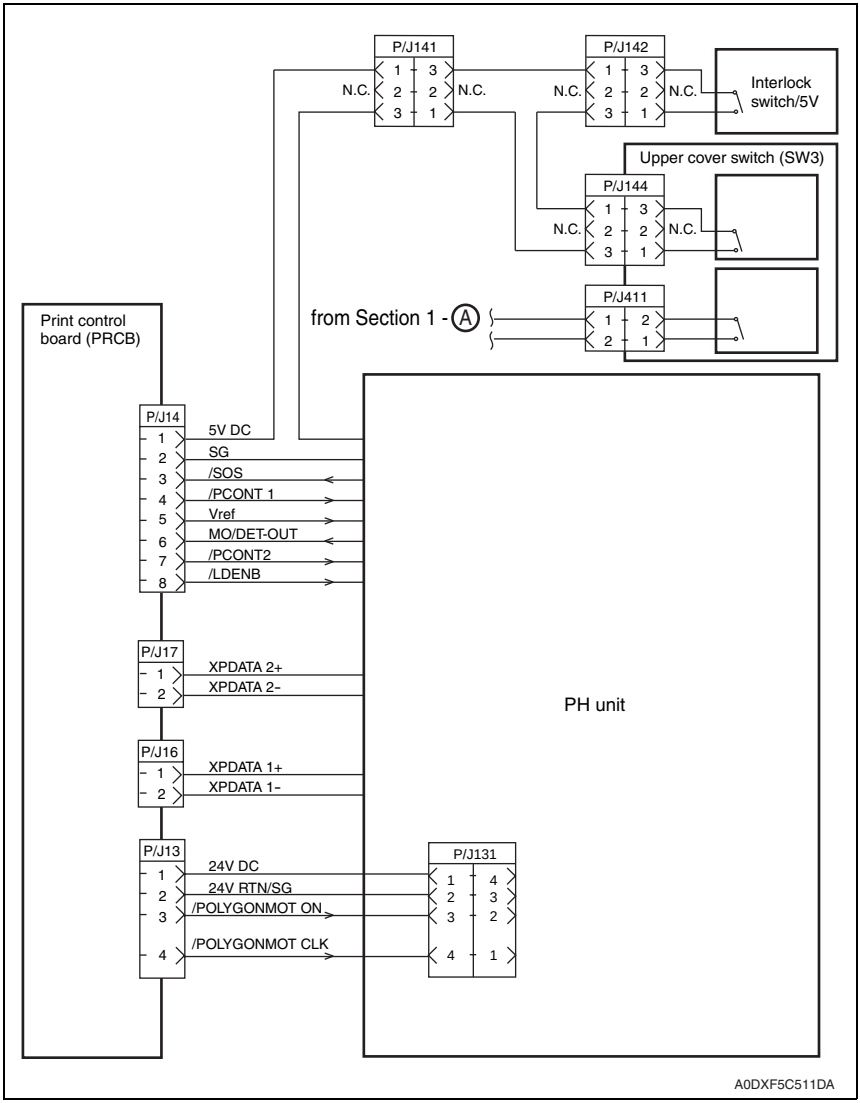
Signal line name	Description
PS4 ON	Signal from tray2 near empty sensor (PS4). This signal goes Low when light is received.
PS3 ON	Signal from tray2 media empty sensor (PS3). This signal goes Low when light is received.
CL2 ON	Control signal for tray2 media feed clutch (CL2). Low: ON / High: OFF
TRAY1 MEDIA SNR ON	Signal from tray1 media empty sensor. This signal goes Low when light is received.
PS1 ON	Signal from registration sensor (PS1). This signal goes Low when light is received.
CL1 ON	Control signal for tray1 media feed clutch (CL1). Low: ON / High: OFF
CL3 ON	Control signal for registration roller clutch (CL3). Low: ON / High: OFF
FAN ALARM	Fan monitor signal. This signal goes High if there is a trouble with fusing cooling fan motor (FM1).
D OUT	Signal indicating detection of toner in the toner cartridge, from toner near empty sensor.

18.1.6 Section 5: PH unit, upper cover switch, interlock switch/5V

A. pagepro 5650EN



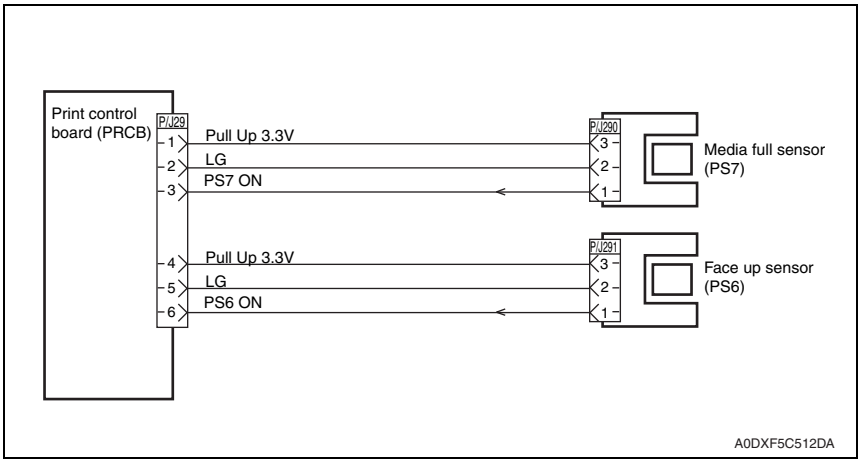
B. pagepro 4650EN



Signal line name	Description
/SOS	SYNC signal generated by SOS sensor. This signal commands start of each scan.
/PCONT	Sample / Hold circuit Low: Sampled (LD is forcibly lit up); High: Held
Vref	Laser output control signal for determining or adjusting the current flowing through laser diode.
MO/DET-OUT	Laser output monitor signal for providing feedback of laser output beam from laser diode (analog signal).

Signal line name	Description
/LDENB	Control signal permitting emission of laser diode. High: laser diode OFF.
XP DATA+	Print image data. DATA+ > DATA-: lit up DATA+ < DATA-: put out
XP DATA-	
/POLYGONMOT ON	Sensor motor control signal for turning ON/OFF polygon motor. Low: ON / High: OFF
/POLYGONMOT CLK	Clock signal to polygon motor.

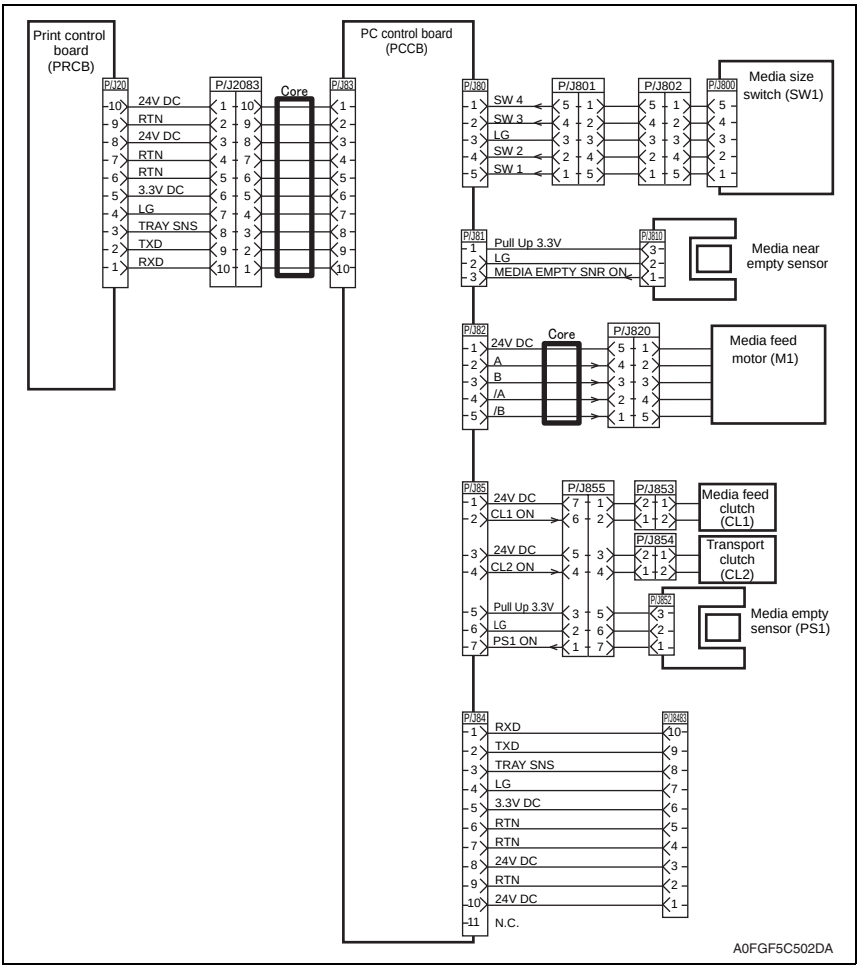
18.1.7 Section 6: Media full sensor, face up sensor



Signal line name	Description
PS7 ON	Signal from media full sensor (PS7). This signal goes Low when light is received.
PS6 ON	Signal from face up sensor (PS6). This signal goes Low when light is received.

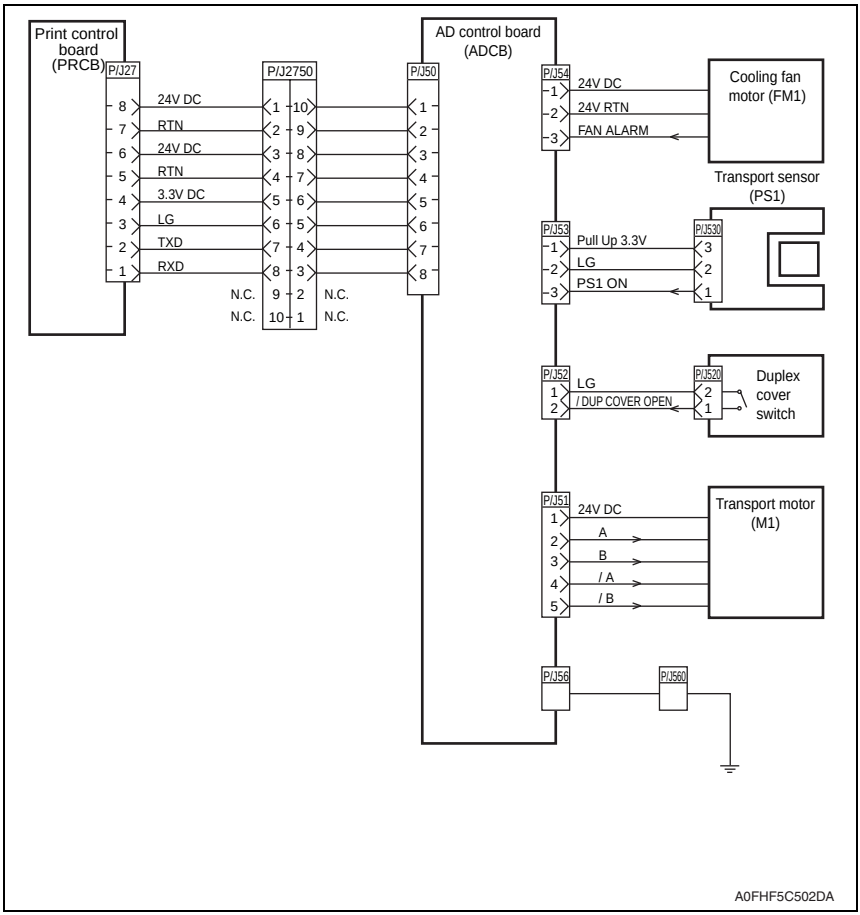
18.2 Options

18.2.1 Lower feeder unit



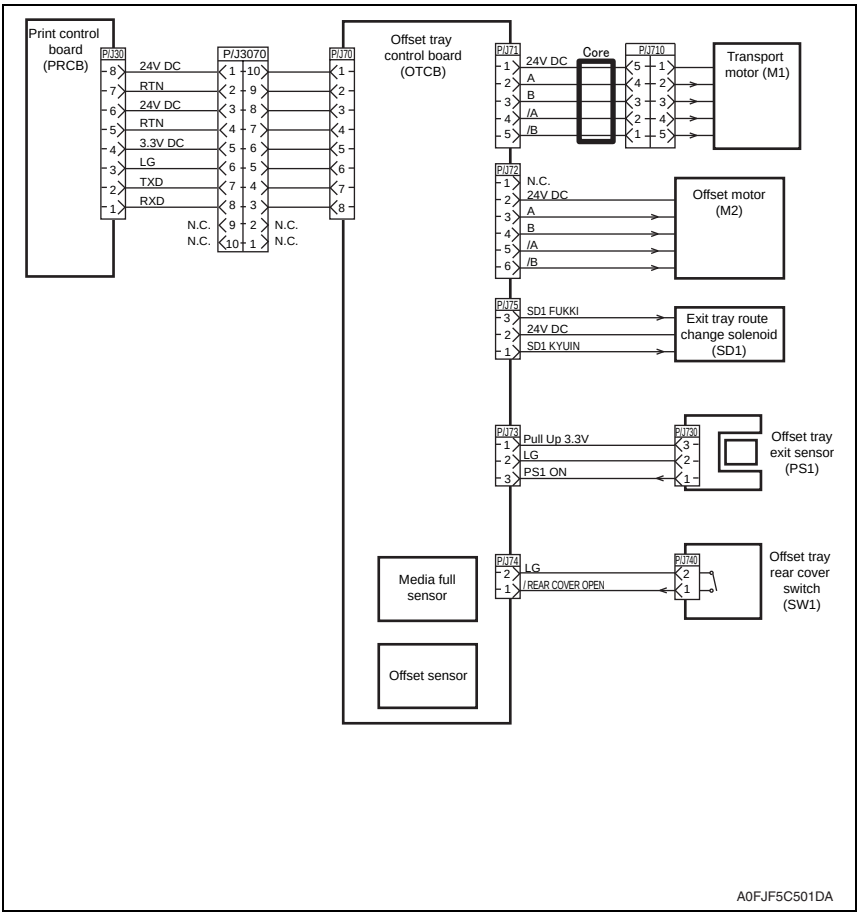
Signal line name	Description
TRAY SNS	Signal detecting an lower feeder unit. ID is recognized by the number of falling edges.
MEDIA EMPTY SNR ON	Signal from offset media near empty sensor. This signal goes Low when light is received.
A and B	Excitation signal for media feed motor (M1). Phases A and B.
/A and /B	Excitation signal for media feed motor (M1). Phases /A and /B.
CLUTCH-TURN ON	Control signal for media feed clutch. Low: ON / High: OFF
CLUTCH-FEED ON	Control signal for transport clutch. Low: ON / High: OFF
PS1 ON	Signal from media empty sensor. This signal goes Low when light is received.

18.2.2 Duplex



Signal line name	Description
FAN ALARM	Fan monitor signal. This signal goes high if there is a trouble with cooling fan motor (FM1).
PS1 ON	Signal from transport sensor (PS1). This signal goes Low when light is received.
/DUP COVER OPEN	Signal from duplex cover switch. This signal goes Low when the duplex cover is closed.
A and B	Excitation signal for transport motor (M1). Phases A and B.
/A and /B	Excitation signal for transport motor (M1). Phases /A and /B.

18.2.3 Offset tray



Signal line name	Description
A and B	Excitation signal for transport motor (M1) and offset motor (M2). Phases A and B.
/A and /B	Excitation signal for transport motor (M1) and offset motor (M2). Phases /A and /B.
SD1 FUKKI SD1 KYUIN	Control signal for offset tray exit sensor (SD1).
PS1 ON	Signal from offset tray exit sensor (PS1). This signal goes Low when light is received.
/REAR COVER OPEN	Signal from offset tray rear cover switch (SW1). This signal goes Low when the rear cover of offset tray is closed.

KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

Lower Feeder Unit

2007.11

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

Revision history

After publication of this service manual, the parts and mechanism may be subject to change for improvement of their performance.
Therefore, the descriptions given in this service manual may not coincide with the actual machine.

When any change has been made to the descriptions in the service manual, a revised version will be issued with a revision mark added as required.

Revision mark:

- To indicate clearly a section revised, show to the left of the revised section.
  A number within represents the number of times the revision has been made.

- To indicate clearly a section revised, show in the lower outside section of the corresponding page.
  A number within represents the number of times the revision has been made.

NOTE

Revision marks shown in a page are restricted only to the latest ones with the old ones deleted.

- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
  The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
  The revision marks for Ver. 2.0 are left as they are.

Date	Service manual Ver.	Revision mark	Descriptions of revision
2007/11	1.0	—	Issue of the first edition

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General

1. Product specifications

A. Type

Name	Add-on 550-sheet media feed cassette
Type	Front-loading type
Installation	Desk type
Document Alignment	Center

B. Media

Media size *1	Letter/Legal/Statement/Executive/A4/A5/A6/B5 (JIS)/B6/Folio/SP Folio/ Foolscap/UK Quarto/Government Letter/Government Legal/16K/Kai 16/Kai 32/ Japanese Postcard/Japanese Postcard-D/B5 (ISO)/Envelope #10/Envelope DL/Envelope C6/Envelope Chou #3/Envelope Monarch/Envelope You #4/Custom size
	Width: 98.4 - 215.9 (3.0 - 8.5 inch) Length: 148.0 - 355.6 (5.0 - 14.0 inch)
Media type	Plain paper pagepro 5650EN: 68 to 105 g/m²; 18.13 to 28 lb. pagepro 4650EN: 60 to 105 g/m²; 16 to 28 lb. Recycled paper pagepro 5650EN: 68 to 105 g/m²; 18.13 to 28 lb. pagepro 4650EN: 60 to 105 g/m²; 16 to 28 lb. OHP transparencies Envelopes Labels Thick 1 (106 to 159 g/m²; 28.27 to 42.4 lb.) Thick 2 (160 to 216 g/m²; 42.67 to 57.6 lb.) Thick 3 (106 to 216 g/m²; 28.27 to 57.6 lb.) *2 Postcards Thin paper *2
Capacity	Plain/Recycled paper: 550 sheets Transparency: 100 sheets Envelope: 80 sheets Labels: 290 sheets Thick paper: 160 sheets Postcard: 200 sheets Thin paper: 550 sheets

*1: Plain paper and recycle paper are unsupported paper types with printing in A6, envelope #10, envelope C6, envelope DL, envelope monarch, envelope youkei #4, envelope choukei #3, youkei 0, envelope choukei #4, japanese postcard, or custom size of 120 mm (width) or less.

*2: Lower feeder unit for pagepro 5650EN only

C. Machine specifications

Dimensions	421.8 mm (W) × 451.6 mm (D) × 143.0 mm (H) 16.5 inch (W) × 17.75 inch (D) × 5.75 inch (H)
Weight	Approx. 8.42 kg (18.5 lb)

NOTE

- **These specifications are subject to change without notice.**

Maintenance

2. Periodic check

2.1 Maintenance procedure (periodic parts check)

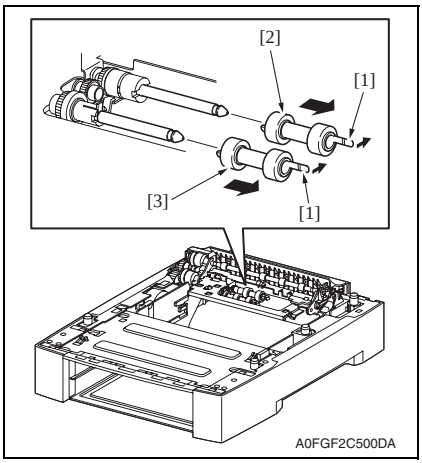
2.1.1 Replacing the feed roller assy and pick-up roller assy

A. Periodically replaced parts/cycle

- Feed roller assy: Every 200,000 prints
- Pick-up roller assy: Every 200,000 prints

B. Replacing procedure

1. Remove the lower feeder unit.
See P.7



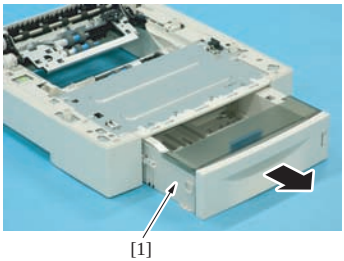
2. Unlock the hook [1], and remove the feed roller assy [2] and pick-up roller assy [3] from the shaft.

2.1.2 Replacing the separation roller assy

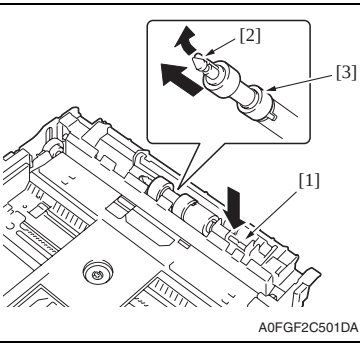
A. Periodically replaced parts/cycle

- Separation roller assy: Every 200,000 prints

B. Replacing procedure



1. Slide out the tray from the lower feeder unit.



2. While pressing down the holder [1], unlock the hook [2] and remove the separation roller assy [3].

3. Other

3.1 Disassembly/adjustment prohibited items

A. Paint-locked screws

NOTE

- **To prevent loose screws, a screw lock in blue or green series color is applied to the screws.**
- **The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.**
- **If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.**

B. Red-painted screws

NOTE

- **The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.**
- **Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.**

C. Variable resistors on board

NOTE

- **Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.**

D. Removal of PWBs

⚠ CAUTION

- **When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal procedures.**
- **The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.**
- **Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.**

3.2 Disassembly/assembly list (other parts)

A. Disassembly/assembly parts list

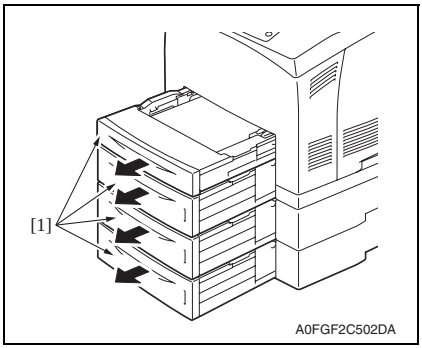
No	Section	Part name	Ref. page
1	Unit	Lower Feeder Unit	P.7
2	Exterior parts	Rear cover	P.8
3	Boards	PC control board (PCCB)	P.9
4		Media size switch (SW1)	P.9
5	Motor	Media feed motor (M1)	P.10
6	Clutches	Media feed clutch (CL1)	P.12
7		Transport clutch (CL2)	P.13

B. Cleaning parts list

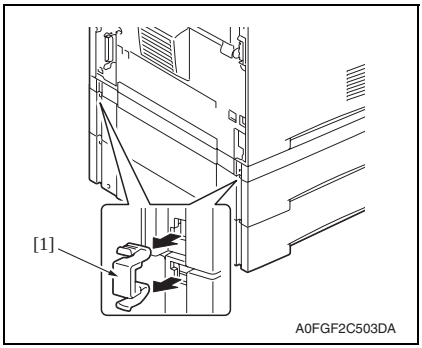
No	Section	Part name	Ref. page
1	Media feed section	Feed roller	P.14
2		Pick-up roller	P.14
3		Separation roller	P.14

3.3 Disassembly/assembly procedure

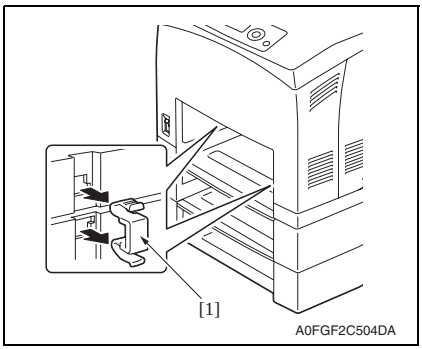
3.3.1 Lower Feeder Unit



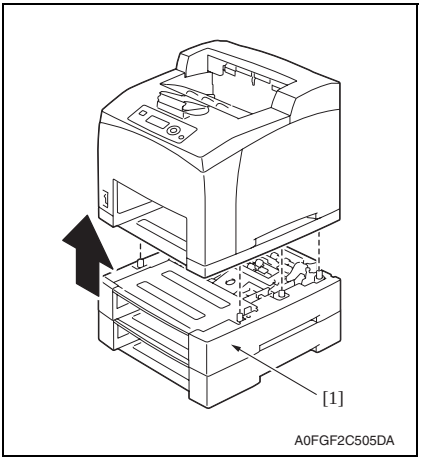
1. Remove all trays [1].



2. Remove two fixing pieces [1] from the back of the main body.



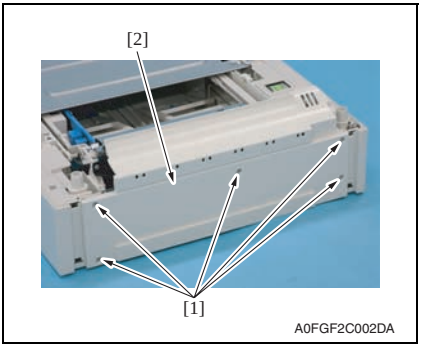
3. Remove two fixing pieces [1] from where the trays are slid into.



4. Raise the main body and remove the lower feeder unit [1].

3.3.2 Rear cover

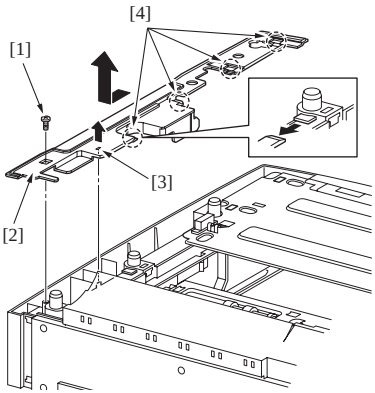
1. Remove the Lower Feeder Unit.
See P.7



2. Remove five screws [1], and remove the rear cover [2].

3.3.3 PC control board (PCCB)

1. Remove the Lower Feeder Unit.
See P.7



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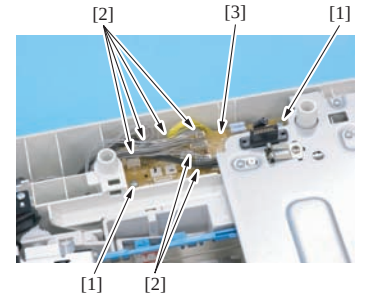
2. Remove the screw [1].
3. Raise the part [3] on the right plate cover [2] a little in the direction of the arrow to detach the part from the boss.
4. Slide the right plate cover [2] in the direction of the arrow to unlock four claws [4] and remove the right plate cover.



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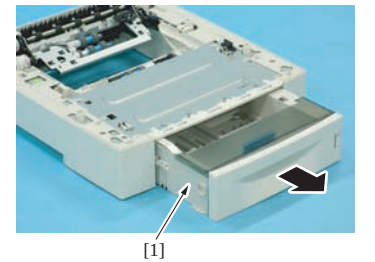
5. Remove two screws [1] and disconnect six connectors [2], and remove the PC control board [3].

3.3.4 Media size switch (SW1)

1. Remove the Lower Feeder Unit.
See P.7



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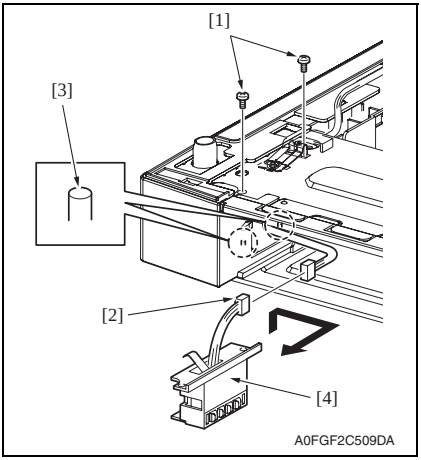
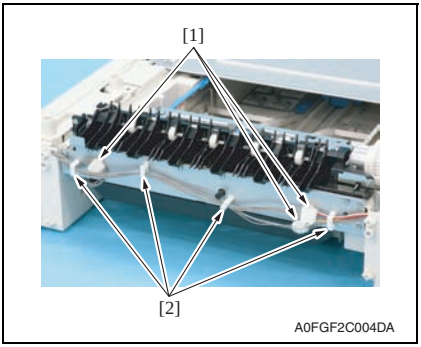
2. Slide out the tray from the lower feeder unit.



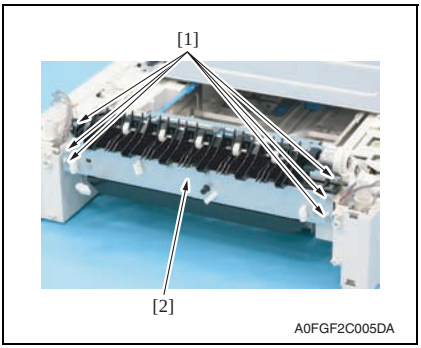
3. Remove two screws [1], disconnect the connector [2], and detach the media size switch [4] from two bosses [3].

3.3.5 Media feed motor (M1)

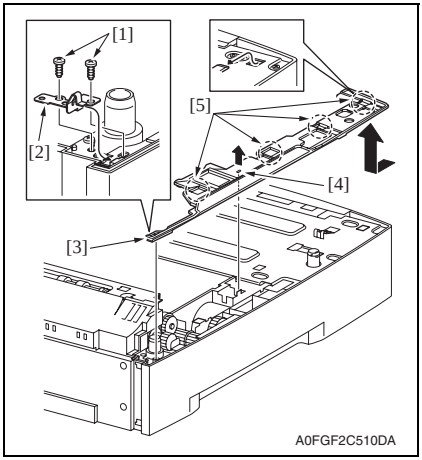
1. Remove the Lower Feeder Unit.
See P.7
2. Remove the rear cover.
See P.8



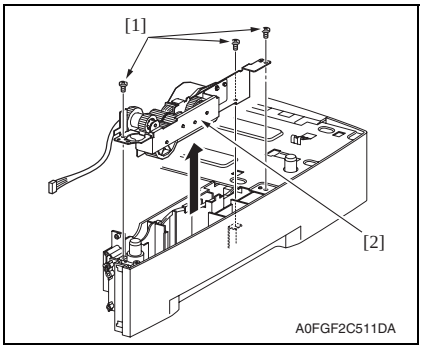
3. Disconnect three connectors [1] and remove the harness from four wire saddles [2].



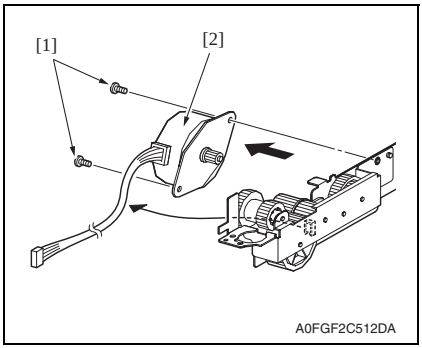
4. Remove six screws [1], and remove the media feed unit [2].



5. Remove two screws [1], and remove the earth plate [2].
6. Raise the part [4] on the left plate cover [3] a little in the direction of the arrow to detach the part from the boss.
7. Slide the left plate cover [3] in the direction of the arrow to unlock four claws [5] and remove the left plate cover.



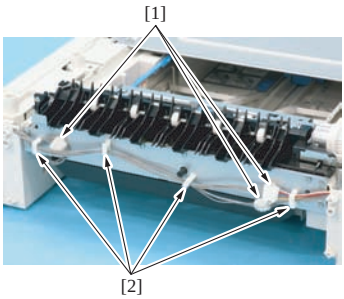
8. Remove three screws [1], and remove the drive unit [2].



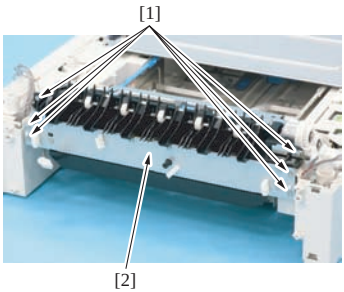
9. Remove two screws [1], and remove the media feed motor [2].

3.3.6 Media feed clutch (CL1)

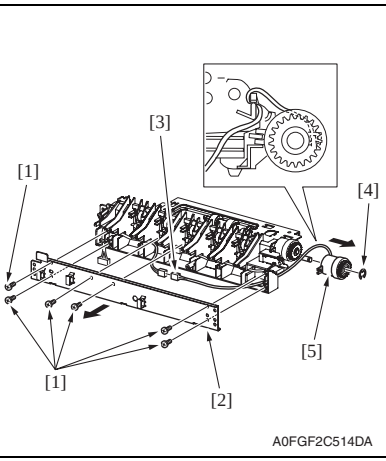
1. Remove the Lower Feeder Unit.
See P.7
2. Remove the rear cover.
See P.8



3. Disconnect three connectors [1] and remove the harness from four wire saddles [2].



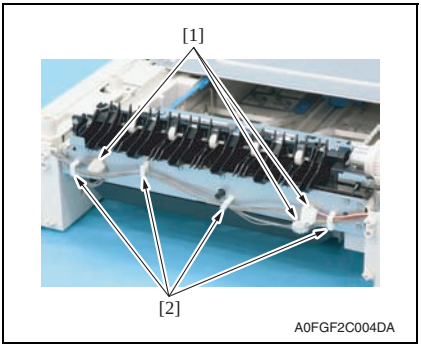
4. Remove six screws [1], and remove the media feed unit [2].



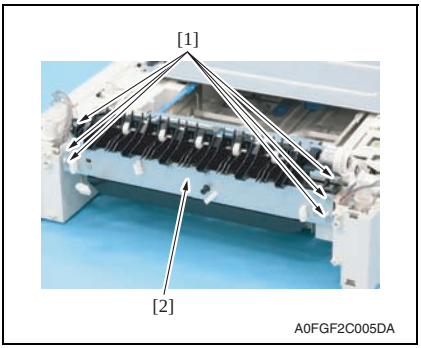
5. Remove six screws [1], and remove the sheet metal [2].
6. Disconnect the connector [3] and remove the E-ring [4], and remove the media feed clutch [5].

3.3.7 Transport clutch (CL2)

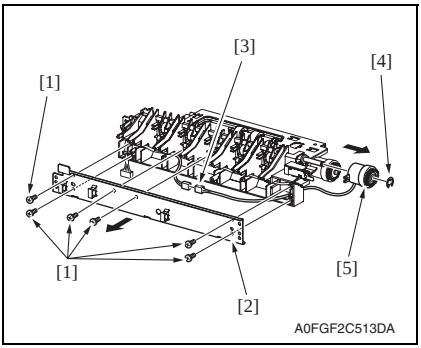
1. Remove the Lower Feeder Unit.
See P.7
2. Remove the rear cover.
See P.8



3. Disconnect three connectors [1] and remove the harness from four wire saddles [2].



4. Remove six screws [1], and remove the media feed unit [2].



5. Remove six screws [1], and remove the sheet metal [2].
6. Disconnect the connector [3] and remove the E-ring [4], and remove the transport clutch [5].

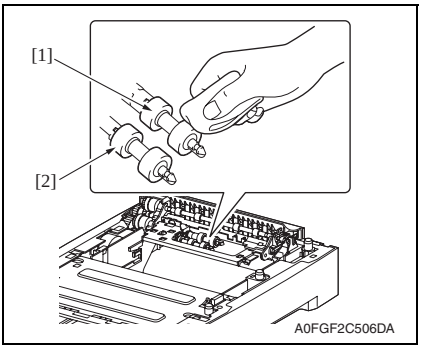
3.4 Cleaning procedure

NOTE

- **The alcohol used in this cleaning procedure is isopropyl alcohol.**

3.4.1 Feed roller and pick-up roller

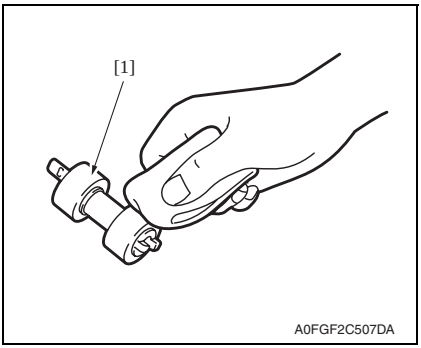
1. Remove the lower feeder unit.
See P.7



2. Using a cleaning pad dampened with alcohol, wipe the feed roller [1] and pick-up roller [2].

3.4.2 Separation roller

1. Remove the separation roller assy.
See P.4



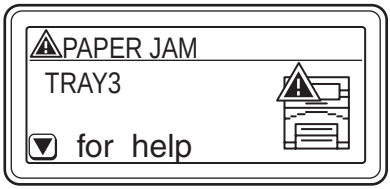
2. Using a cleaning pad dampened with alcohol, wipe the separation roller [1].

Troubleshooting

4. Jam display

4.1 Misfeed display

- When a media misfeed occurs, a message is displayed on the control panel.



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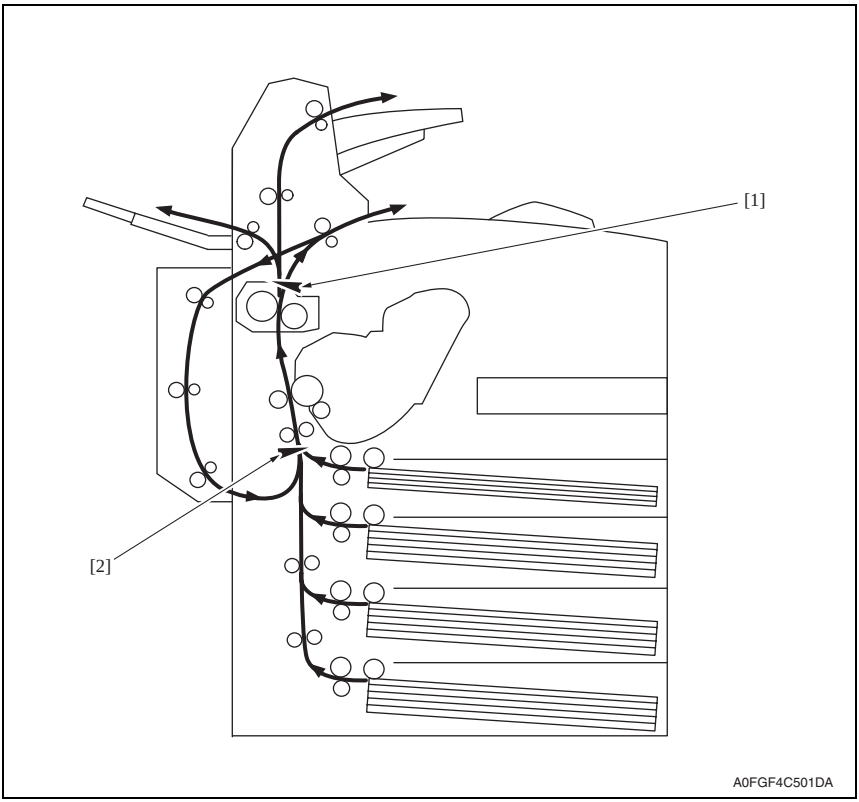
Display		Misfeed location	Misfeed clearing location	Ref. page
LCD1	LCD2			
PAPER JAM	TRAY3	Tray 3 media feed section	Tray3/top cover	P.18
	TRAY4	Tray 4 media feed section	Tray4/top cover	P.19

4.2 Misfeed display resetting procedure

- Open the relevant cover, clear the sheet of misfed media, and close the cover.

4.3 Sensor layout

- For a system equipped with a lower feeder unit.



[1] Exit sensor

[2] Registration sensor (PS1)

4.4 Solution

4.4.1 Initial check items

- When a media misfeed occurs, first check the following initial check items.

Check Item	Action
Does the media meet product specifications?	Change the media.
Is the media curled, wavy, or damp.	Change the media. Instruct the user in correct media storage requirements.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media path.
Are the rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at the correct position to accommodate media?	Set as necessary.
Are the actuators found operational as checked for correct operation?	Correct or change the defective actuator.

4.4.2 Misfeed at the tray3 media feed section

A. Detection timing

Type	Description
Detection of misfeed at tray 3 media feed section	The leading edge of media does not block the registration sensor (PS1) after the lapse of a predetermined period of time after the media is fed from the tray 3.

B. Action

Relevant electrical parts	
Media feed motor (M1) Media feed clutch (CL1) Transport clutch (CL2) Registration sensor (PS1)	PC control board (PCCB) MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PS1 sensor check	PRCB P/J24-11 (ON)	See P.193 of the main unit service manual.
3	CL1 operation check	PCCB P/J85-2 (ON)	See P.200 of the main unit service manual.
4	CL2 operation check	PCCB P/J85-4 (ON)	
5	M1 operation check	PCCB P/J82-2 to 5	
6	Change PCCB.	—	
7	Change MFPB.	—	

4.4.3 Misfeed at the tray 4 media feed section

A. Detection timing

Type	Description
Detection of misfeed at tray 4 media feed section	The leading edge of media does not block the registration sensor (PS1) after the lapse of a predetermined period of time after the media is fed from the tray 4.

B. Action

Relevant electrical parts	
Media feed motor (M1) Media feed clutch (CL1) Transport clutch (CL2) Registration sensor (PS1)	PC control board (PCCB) MFP board (MFPB)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PS1 sensor check	PRCB P/J24-11 (ON)	See P.193 of the main unit service manual.
3	CL1 operation check	PCCB P/J85-2 (ON)	See P.200 of the main unit service manual.
4	CL2 operation check	PCCB P/J85-4 (ON)	
5	M1 operation check	PCCB P/J82-2 to 5	
6	Change PCCB.	—	
7	Change MFPB.	—	

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KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

Duplex

2007.11

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

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Date	Service manual Ver.	Revision mark	Descriptions of revision
2007/11	1.0	—	Issue of the first edition

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General

1. Product specifications

A. Type

Name	Duplex
Installation	Mounted on the right side
Reversing system	Exit roller switchback
Document alignment	Center

B. Media

Media size	Letter/Legal/Executive/A4/A5/A6/B5 (JIS)/B6/Folio/SP Folio/Foolscap/UK Quarto/Government Letter/Government Legal/16K/Kai 16/Kai 32/Japanese Postcard/Japanese Postcard-D/B5 (ISO)/Custom size

C. Machine specifications

Dimensions	For pagepro 4650EN	351.7 mm (W) × 96.1 mm (D) × 218.5 mm (H) 13.75 inch (W) × 3.75 inch (D) × 8.5 inch (H)
	For pagepro 5650EN	351.7 mm (W) × 146.2 mm (D) × 256.6 mm (H) 13.75 inch (W) × 5.75 inch (D) × 10 inch (H)
Weight	For pagepro 4650EN	Approx. 1.9 kg (4.25 lb)
	For pagepro 5650EN	Approx. 2.1 kg (4.75 lb)

NOTE

- **These specifications are subject to change without notice.**

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Maintenance

2. Periodical check

2.1 Maintenance procedure (Periodical check parts)

- Periodically replaced parts are not employed.

3. Other

3.1 Disassembly/adjustment prohibited items

A. Paint-locked screws

NOTE

- **To prevent loose screws, a screw lock in blue or green series color is applied to the screws.**
- **The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.**
- **If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.**

B. Red-painted screws

NOTE

- **The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.**
- **Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.**

C. Variable resistors on board

NOTE

- **Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.**

D. Removal of PWBs

⚠ CAUTION

- **When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal procedures.**
- **The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.**
- **Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.**

3.2 Disassembly/assembly list (other parts)

3.2.1 Disassembly/assembly parts list

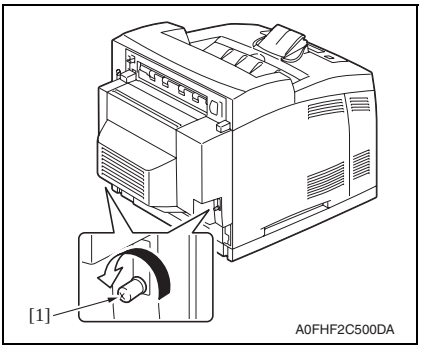
No	Section	Part name	Ref. page
1	Unit	Duplex unit	P.6
2	Exterior parts	Right cover	P.7
3		Left cover	P.7
4		Top cover	P.8
5	Board and etc.	AD control board (ADCB)	P.8
6	Others	Transport motor (M1)	P.9
7		Cooling fan motor (FM1)	P.10

3.2.2 Cleaning parts list

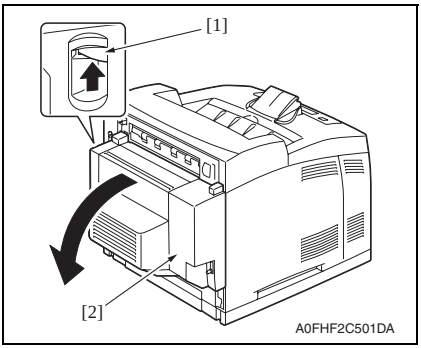
No	Section	Part name	Ref. page
1	Transport section	Transport rollers	P.12

3.3 Disassembly/assembly procedure

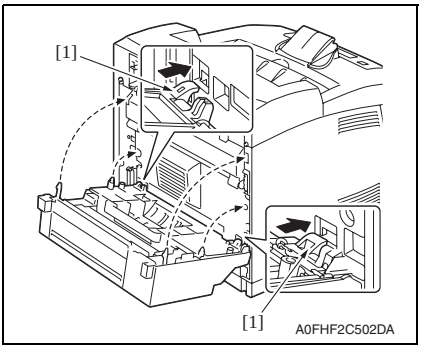
3.3.1 Duplex unit



1. Loosen two screws [1].



2. Raise the lever [1] and remove the duplex unit [2].

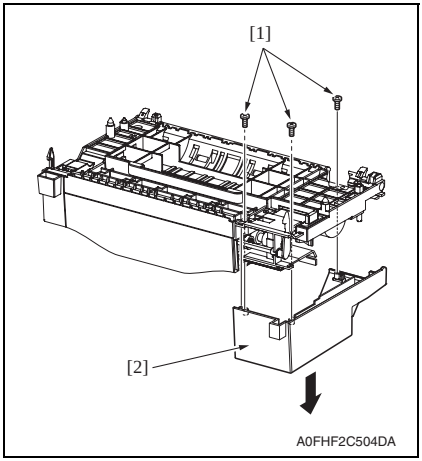


NOTE

- **Fit the left and right bottom claws [1] into the holes to reinstall the duplex unit.**

3.3.2 Right cover

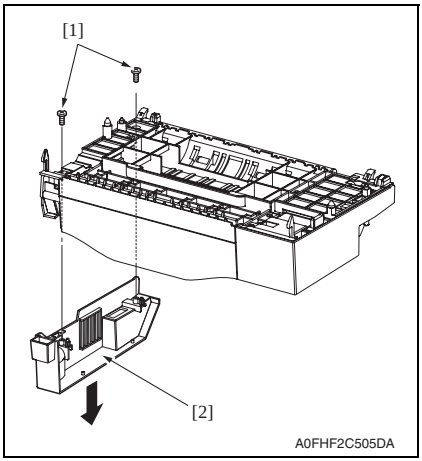
1. Remove the duplex unit.
See P.6



2. Remove three screws [1], and the right cover [2].

3.3.3 Left cover

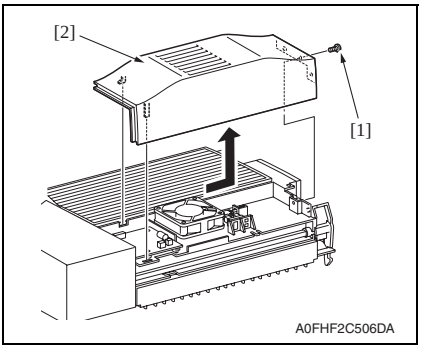
1. Remove the duplex unit.
See P.6



2. Remove two screws [1], and remove the left cover [2].

3.3.4 Top cover

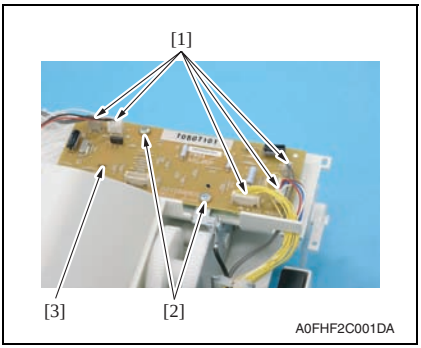
1. Remove the duplex unit.
See P.6
2. Remove the left cover.
See P.7



3. Remove the screw [1], and remove the top cover [2].

3.3.5 AD control board (ADCB)

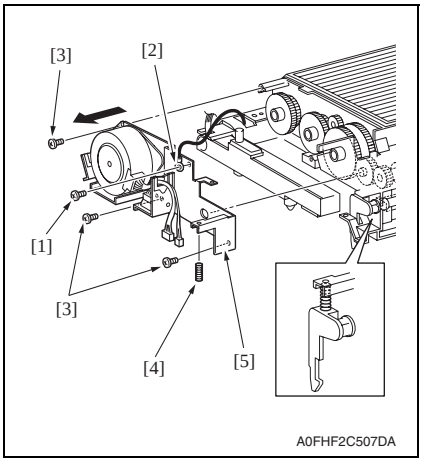
1. Remove the duplex unit.
See P.6
2. Remove the left cover.
See P.7
3. Remove the top cover.
See P.8
4. Remove the right cover.
See P.7



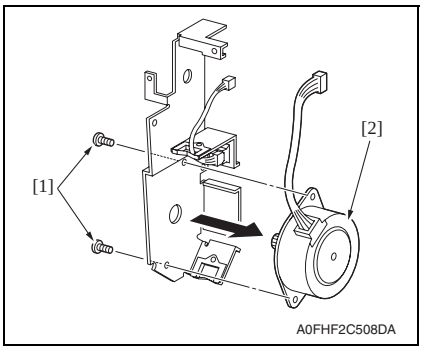
5. Disconnect five connectors [1] and remove two screws [2], and remove the AD control board [3].

3.3.6 Transport motor (M1)

1. Remove the duplex unit.
See P.6
2. Remove the AD control board.
See P.8



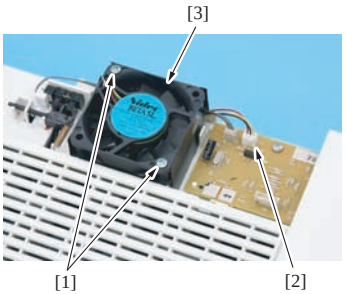
3. Remove the screw [1], and remove the ground wire [2].
4. Remove three screws [3] and the spring [4], and remove the transport motor assy [5].



5. Remove two screws [1], and remove the transport motor [2].

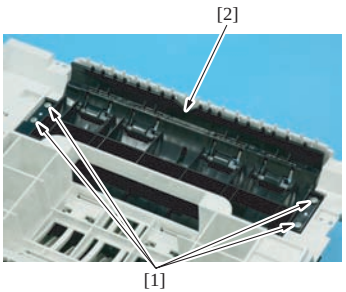
3.3.7 Cooling fan motor (FM1)

1. Remove the duplex unit.
See P.6
2. Remove the left cover.
See P.7
3. Remove the top cover.
See P.8



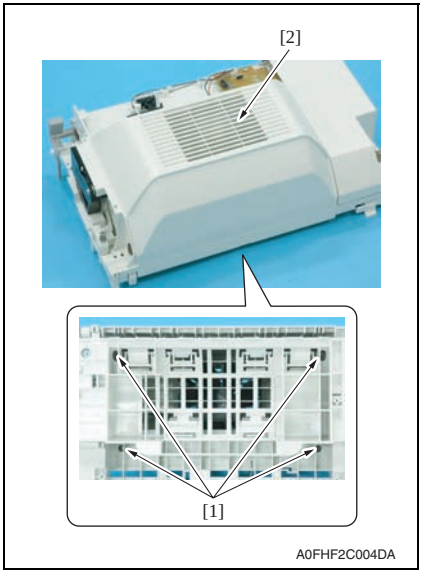
- **For pagepro 4650EN**

4. Remove two screws [1] and disconnect the connector [2], and remove the cooling fan motor [3].

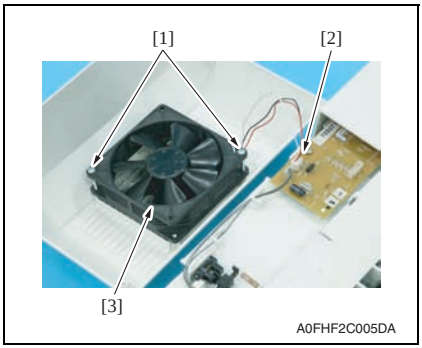


- **For pagepro 5650EN**

5. Remove four screws [1], and remove the transport roll assy [2].



4. Remove four screws [1], and remove the cooling fan motor cover [2].



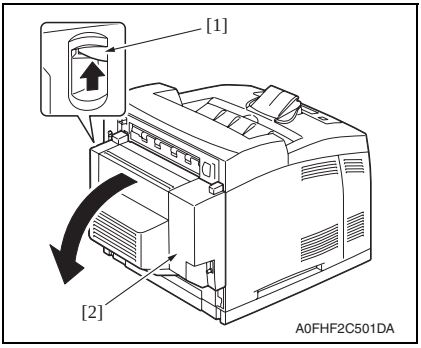
5. Remove two screws [1] and disconnect the connector [2], and remove the cooling fan motor [3].

3.4 Cleaning procedure

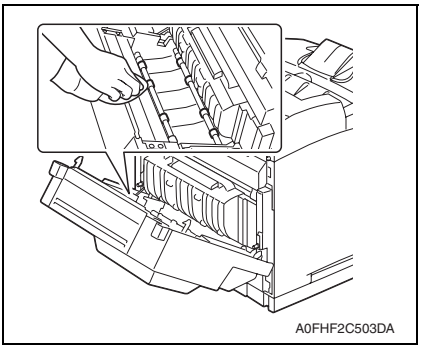
NOTE

- **The alcohol used in this cleaning procedure is isopropyl alcohol.**

3.4.1 Transport rollers



1. Raise the lever [1] and open the duplex cover [2].



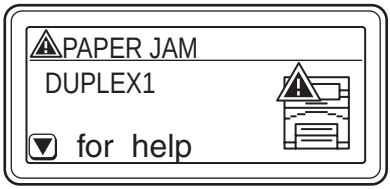
2. Using a cleaning pad dampened with alcohol, wipe the transport rollers.

Troubleshooting

4. Jam display

4.1 Misfeed display

- When a media misfeed occurs, a message is displayed on the control panel.



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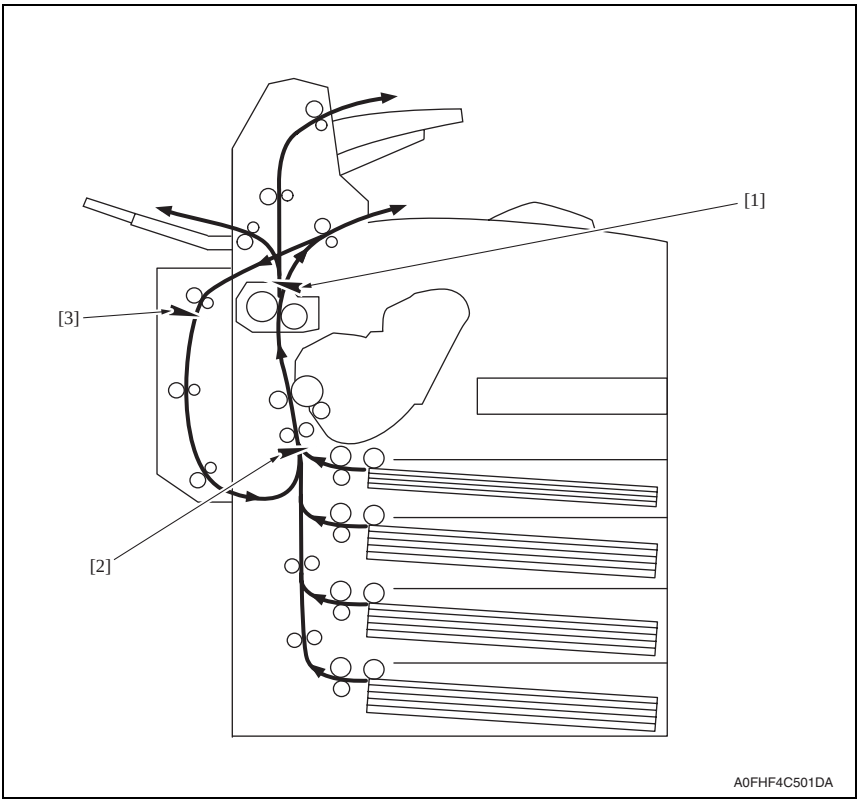
Display		Misfeed location	Misfeed clearing location	Ref. page
LCD1	LCD2			
PAPER JAM	DUPLEX 1	Duplex option media feed section	Duplex cover	P.16
PAPER JAM	DUPLEX 2	Duplex option media transport section		P.17

4.2 Misfeed display resetting procedure

- Open the relevant cover, clear the sheet of misfed media, and close the cover.

4.3 Sensor layout



[1] Exit sensor

[2] Registration sensor (PS1)

[3] Transport sensor (PS1)

4.4 Solution

4.4.1 Initial check items

- When a media misfeed occurs, first make checks of the following initial check items.

Check Item	Action
Does media meet product specifications?	Change media.
Is media curled, wavy, or damp.	Change media. Instruct user in correct media storage.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media path.
Are rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at correct position to accommodate media?	Set as necessary.
Are actuators found operational as checked for correct operation?	Correct or change the defective actuator.

4.4.2 Misfeed at duplex option media feed section

A. Detection timing

Type	Description
Detection of misfeed at duplex option media feed section	• Media does not turn ON the transport sensor (PS1) after the lapse of a predetermined period of time after the media is fed. • The transport sensor (PS1) is not turned OFF after the lapse of a predetermined period of time after media turns ON the transport sensor.

B. Action

Relevant Electrical Parts	
Transport sensor (PS1) Transport motor (M1)	AD control board (ADCB) Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PS1 sensor check	ADCB P/J53-3 (ON)	See P.201 of the main unit service manual.
3	M1 operation check	ADCB P/J51-2 to 5	
4	Change ADCB.	—	
5	Change PRCB.	—	

4.4.3 Misfeed at duplex option media transport section

A. Detection timing

Type	Description
Detection of misfeed at duplex option media transport section	Media turns ON the registration sensor (PS1) before the lapse of a predetermined period of time after the media turns ON the transport sensor (PS1).
	Media does not turn ON the registration sensor (PS1) after the lapse of a predetermined period of time after the media turns ON the transport sensor (PS1).
Detection of media left at duplex option media transport section	Transport sensor (PS1) is turned ON when the power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant Electrical Parts	
Registration sensor (PS1) Transport sensor (PS1) Transport motor (M1) Registration roller clutch (CL3)	AD control board (ADCB) Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	Registration sensor check	PRCB P/J24-11 (ON)	See P.193 of the main unit service manual.
3	Transport sensor check	ADCB P/J53-3 (ON)	See P.201 of the main unit service manual.
4	M1 operation check	ADCB P/J51-2 to 5	
5	Change ADCB.	—	
6	Change PRCB.	—	

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KONICA MINOLTA

SERVICE MANUAL

FIELD SERVICE

Offset Tray

2007.11

KONICA MINOLTA BUSINESS TECHNOLOGIES, INC. Ver. 1.0

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- When a page revised in Ver. 2.0 has been changed in Ver. 3.0:
  The revision marks for Ver. 3.0 only are shown with those for Ver. 2.0 deleted.
- When a page revised in Ver. 2.0 has not been changed in Ver. 3.0:
  The revision marks for Ver. 2.0 are left as they are.

Date	Service manual Ver.	Revision mark	Descriptions of revision
2007/11	1.0	—	Issue of the first edition

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General

1. Product specifications

A. Type

Name	Offset tray
Installation	Install at the top section of the printer
Document alignment	Center
Media ejection system	Face down

B. Functions

Modes	Offset, Job separation

C. Media type

Media size	Width: 89 to 216 mm (3.5 - 8.5 inch) Length: 140 to 356 mm (5.5 - 14.0 inch)
Capacity	Plain/Recycled paper: 500 sheets

D. Machine specifications

Dimensions	417.8 mm (W) × 312.5 mm (D) × 226.4 mm (H) 16.5 inch (W) × 12.25 inch (D) × 9 inch (H)
Weight	Approx. 2.6 kg (5.75 lb)

NOTE

- **These specifications are subject to change without notice.**

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Maintenance

2. Periodical check

2.1 Maintenance procedure (Periodical check parts)

- Periodically replaced parts are not employed.

3. Other

3.1 Disassembly/adjustment prohibited items

A. Paint-locked screws

NOTE

- **To prevent loose screws, a screw lock in blue or green series color is applied to the screws.**
- **The screw lock is applied to the screws that may get loose due to the vibrations and loads created by the use of machine or due to the vibrations created during transportation.**
- **If the screw lock coated screws are loosened or removed, be sure to apply a screw lock after the screws are tightened.**

B. Red-painted screws

NOTE

- **The screws which are difficult to be adjusted in the field are painted in red in order to prevent them from being removed by mistake.**
- **Do not remove or loosen any of the red-painted screws in the field. It should also be noted that, when two or more screws are used for a single part, only one representative screw may be marked with the red paint.**

C. Variable resistors on board

NOTE

- **Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.**

D. Removal of PWBs

⚠ CAUTION

- **When removing a circuit board or other electrical component, refer to "Handling of PWBs" and follow the corresponding removal procedures.**
- **The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.**
- **Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.**

3.2 Disassembly/assembly list (other parts)

3.2.1 Disassembly/assembly parts list

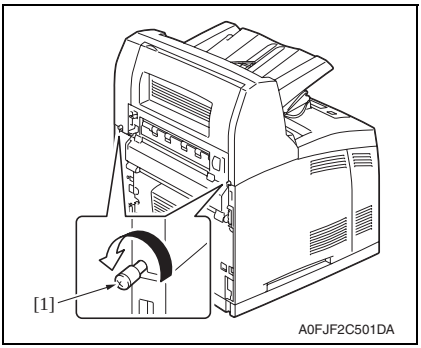
No	Section	Part name	Ref. page
1	Unit	Offset tray	P.6
2	Exterior parts	Offset tray cover	P.7
3		Top cover	P.7
4		Front cover	P.8
5	Board and etc.	Offset tray control board (OTCB)	P.8
6	Others	Transport motor (M1)	P.9
7		Offset motor (M2)	P.9
8		Exit tray route change solenoid (SD1)	P.10

3.2.2 Cleaning parts list

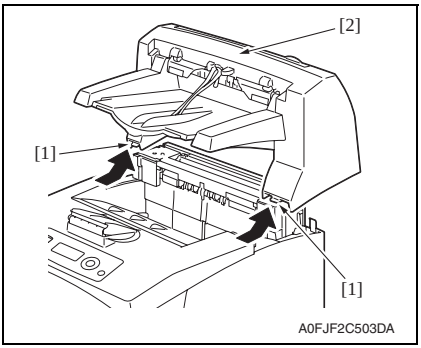
No	Section	Part name	Ref. page
1	Feed section	Media feed rollers	P.11

3.3 Disassembly/assembly procedure

3.3.1 Offset tray

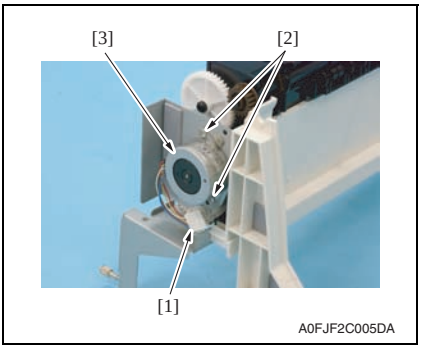


1. Loosen two screws [1].



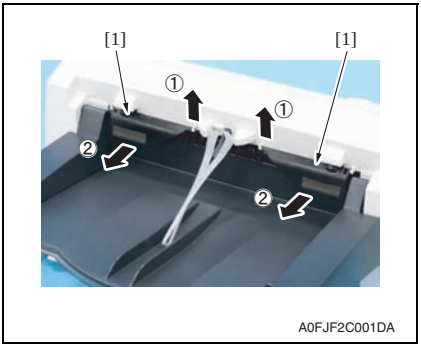
2. Unlock two claws [1] and remove the offset tray [2].

3.3.2 Offset tray cover

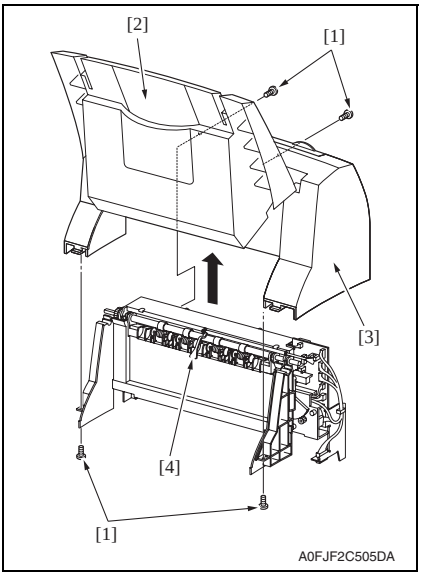


1. Unlock the boss [1] and remove the offset tray cover [2] by moving it in the direction of the arrow.

3.3.3 Top cover



1. Remove two flappers [1].



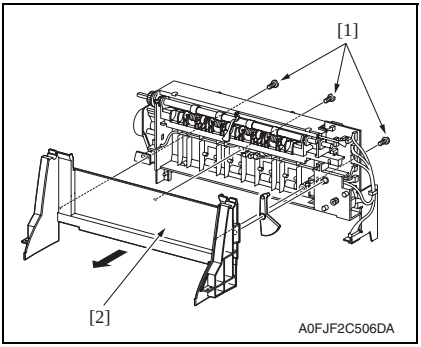
2. Remove four screws [1], and raise the tray [2] close to a vertical position to remove the top cover [3].

NOTE

- **When removing the top cover, take care so that the actuator [4] is not damaged.**

3.3.4 Front cover

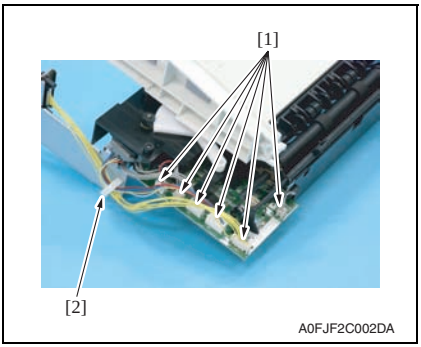
1. Remove the top cover.
See P.7



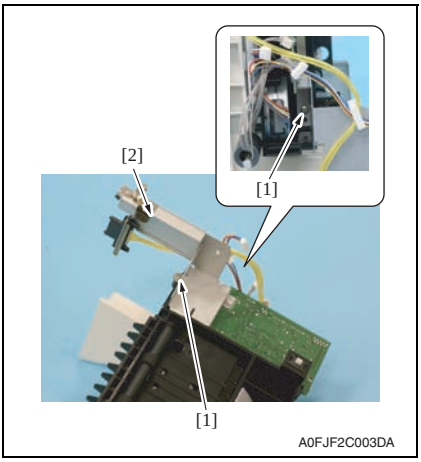
2. Remove three screws [1], and remove the front cover [2].

3.3.5 Offset tray control board (OTCB)

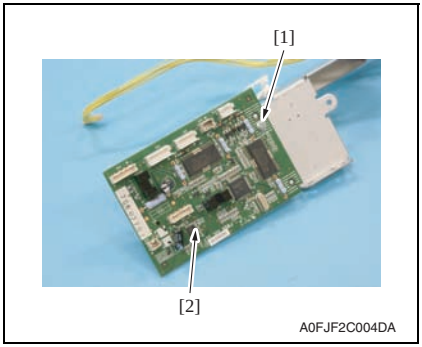
1. Remove the top cover.
See P.7



2. Disconnect six connectors [1] and remove the harness from the wire saddle [2].



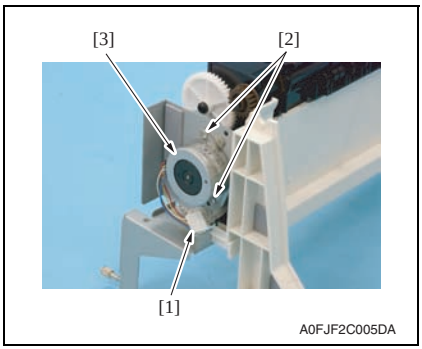
3. Remove two screws [1], and remove the offset tray control board assy [2].



4. Remove the screw [1], and remove the offset tray control board [2].

3.3.6 Transport motor (M1)

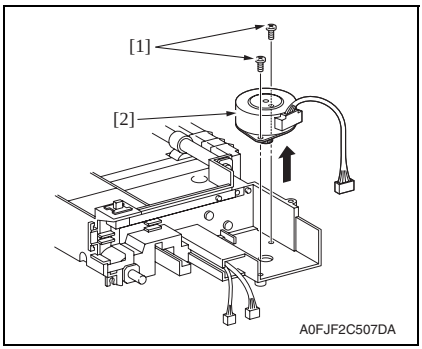
1. Remove the top cover.
See P.7



2. Disconnect the connector [1] and remove two screws [2], and remove the transport motor [3].

3.3.7 Offset motor (M2)

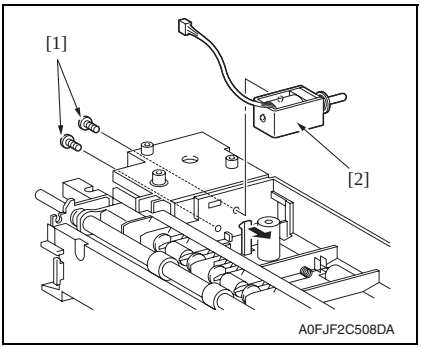
1. Remove the offset tray control board assy.
See P.8



2. Remove two screws [1], and remove the offset motor [2].

3.3.8 Exit tray route change solenoid (SD1)

1. Remove the top cover.
See P.7
2. Remove the front cover.
See P.8
3. Remove the offset tray control board.
See P.8
4. Remove the offset motor.
See P.9



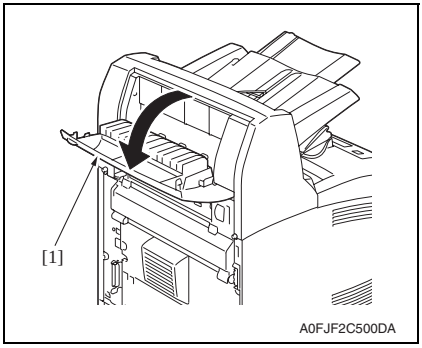
5. Remove two screws [1], and remove the exit tray route change solenoid [2].

3.4 Cleaning procedure

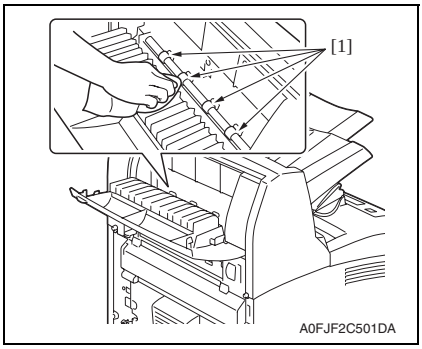
NOTE

- **The alcohol used in this cleaning procedure is isopropyl alcohol.**

3.4.1 Media feed rollers



1. Open the offset tray cover [1].



2. Using a cleaning pad dampened with alcohol, wipe the media feed rollers.

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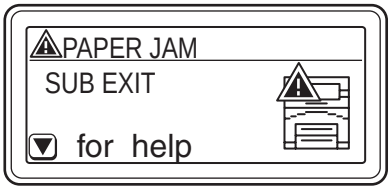
Troubleshooting

4. Jam display

4.1 Misfeed display

- When a media misfeed occurs, a message is displayed on the control panel.



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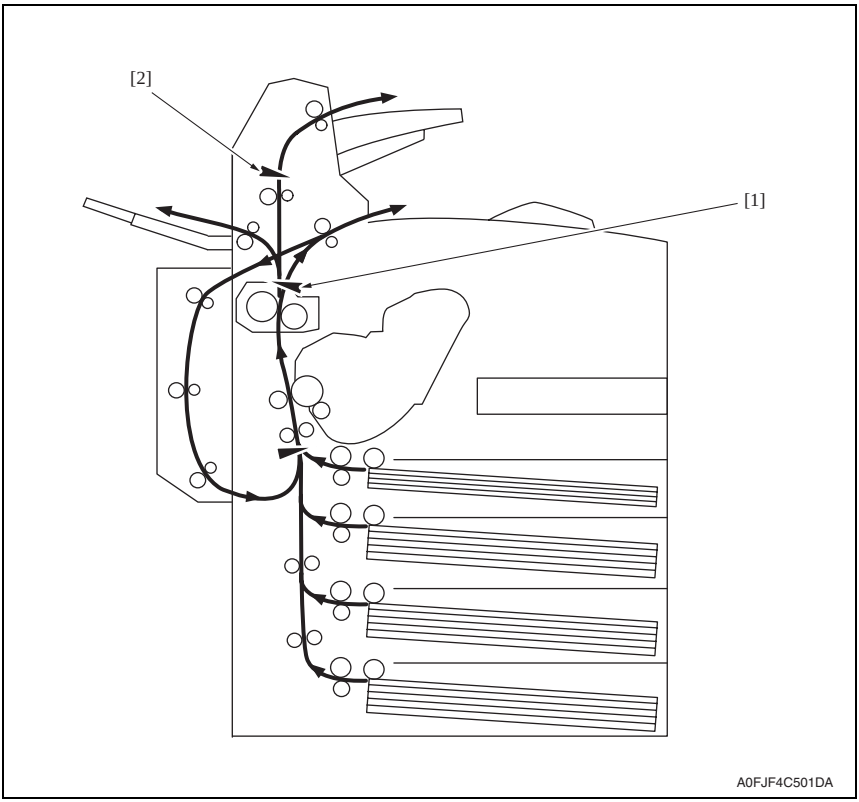
Display		Misfeed location	Misfeed clearing location	Ref. page
LCD1	LCD2			
PAPER JAM	SUB EXIT	Offset tray transport section	Offset tray cover	P.16

4.2 Misfeed display resetting procedure

- Open the relevant cover, clear the sheet of misfed media, and close the cover.

4.3 Sensor layout



[1] Exit sensor

[2] Offset tray exit sensor (PS1)

4.4 Solution

4.4.1 Initial check items

- When a media misfeed occurs, first make checks of the following initial check items.

Check Item	Action
Does media meet product specifications?	Change media.
Is media curled, wavy, or damp.	Change media. Instruct user in correct media storage.
Is a foreign object present along the media path, or is the media path deformed or worn?	Clean or change the media path.
Are rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at correct position to accommodate media?	Set as necessary.
Are actuators found operational as checked for correct operation?	Correct or change the defective actuator.

4.4.2 Misfeed at offset tray media transport section

A. Detection timing

Type	Description
Transport section misfeed detection	Media does not turn ON the offset tray exit sensor (PS1) after the lapse of a predetermined period of time after the media turns ON the exit sensor located in the main body.
	The offset tray exit sensor (PS1) is not turned OFF after the lapse of a predetermined period of time after media turns ON the offset tray exit sensor.
Detection of paper remaining in the transport section	Offset tray exit sensor (PS1) is turned ON when the power switch is set to ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant Electrical Parts	
Exit sensor Offset tray exit sensor (PS1) Transport motor (M1)	Offset tray control board (OTCB) Printer control board (PRCB)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PS1 sensor check	OTCB P/J73-3 (ON)	See P.202 of the main unit service manual.
3	M1 operation check	OTCB P/J71 2 to 5	
4	Change OTCB	—	
5	Change PRCB	—	

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